August 1931

Drug Markets

Established 1914

The Magazine of the Manufacturing Drug Trade

The Magazine for Manufacturers of Pharmaceuticals, Toilet Preparations, Proprietary Medicines, and Flavors. Of primary interest to executives in direct charge, or supervising purchasing, production, and technical control, and for executives concerned with general administrative problems of the industry.

Editorials 119

Ergot in U. S. P. X—Private Brands Again—Campbell's Advice—Dr. Cook-Medalist—Strategy in Cigarettes—Quinine Prices—Business Co-operation—Business to be Had.

Feature Articles

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PSYLLIUM SEED

Psyllium and other Plantago Seeds continue to attract a major share of attention in the industry. Various types of Plantago seeds are being imported. The man in charge of the imports of these seeds is preparing an article describing the types that are coming through. He has grown the various seeds himself as a means of identifying them. The article will appear shortly.

VOL. XXIX

DRUG MARKETS, INC.
PUBLISHERS

NUMBER 2

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 W. 31st St., N.Y. City

Editor
THOMAS R. FARRELL

Business Manager
FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES, THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES; PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE. AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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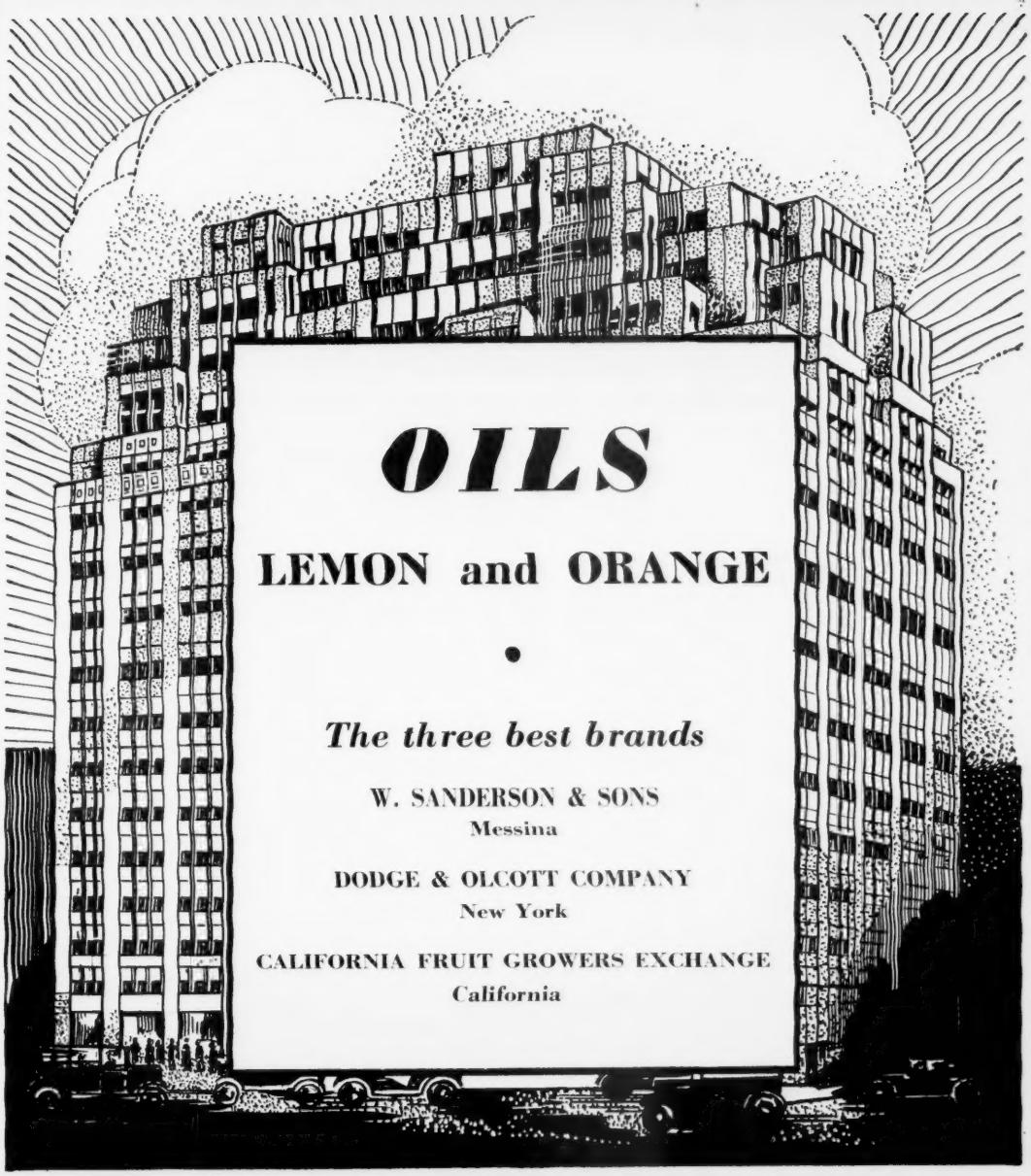
D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products



OILS

LEMON and ORANGE

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The three best brands

W. SANDERSON & SONS
Messina

DODGE & OLCOTT COMPANY
New York

CALIFORNIA FRUIT GROWERS EXCHANGE
California

DODGE AND OLCOTT COMPANY
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"The integrity of the house is reflected in the quality of its products."

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Buyers' Guide

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A. K. Hamilton
Stanco Distributors, Inc.
U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Newport Chemical Works, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.

BEESWAX

Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS

Wilson Laboratories

BORAX

American Potash & Chemical Corp.
Pacific Coast Borax Co.

COD LIVER OIL

P. R. Dreyer Inc.
Chas. L. Huisking & Co.
Norwegian Cod Liver Oil Association

CRUDE DRUGS

S. B. Penick & Company
Soc. An. Erboris

DENTIFRICE BASES

Iliff-Bruff Chemical Co.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

ESSENTIAL OILS

W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc
Magnus, Mabee & Reynard, Inc.
Newport Chemical Works, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.

FLAVORING MATERIALS

California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Ungerer & Co.
van Ameringen-Haebler, Inc.

GELATINES

Coignet Gelatines

GLYCERIN

Colgate-Palmolive-Peet Co.
Harshaw Chemical Co.
Will & Baumer Candle Co., Inc.

MEDICINAL CHEMICALS

Abbott Laboratories
Benzol Products Co.
Dow Chemical Co.
R. W. Greeff & Co.
Harshaw Chemical Co.
Heyden Chemical Corp.
Hoffmann-LaRoche, Inc.
Chas. L. Huisking & Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
Newport Chemical Works, Inc.
N. Y. Quinine & Chemical Works, Inc.
Chas. Pfizer & Co., Inc.
Schering Corporation
Swann Corporation

MINERAL OIL

M. W. Parsons Imports
Schliemann Companies, Inc.

SOAPS

J. L. Hopkins & Co.
S. B. Penick & Co.
John Powell & Co., Inc.

VANILLIN

Fritzsche Bros., Inc.
Givaudan-Delawanna Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works

CONTAINERS

ADHESIVES

Nat'l. Adhesives Corp.

BOTTLES

Owens-Illinois Glass Co.
Swindell Bros.

COLLAPSIBLE TUBES

Art Tube Co.
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

PACKING MATERIALS

Kimberly-Clark Corp.

VIALS

Kimble Glass Co.

CLOSURES

CORKS

Armstrong Cork Co.

INSIDE THREAD CAPS

Spring Stopper Co.

LINERS

Armstrong Cork Co.
Bond Mfg. Corp.

METAL CAPS

Aluminum Seal Co.
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Phoenix Hermetic Co.

PLASTIC CAPS

Armstrong Cork Co.
Bakelite Corp.

MACHINERY & EQUIPMENT

FILLING MACHINES

Alsop Engineering Co.
Arthur Colton Co.
The Karl Kiefer Machine Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.

LABELING EQUIPMENT

Economic Machinery Co.
Liquid Carbonic Corp.

MIXING EQUIPMENT

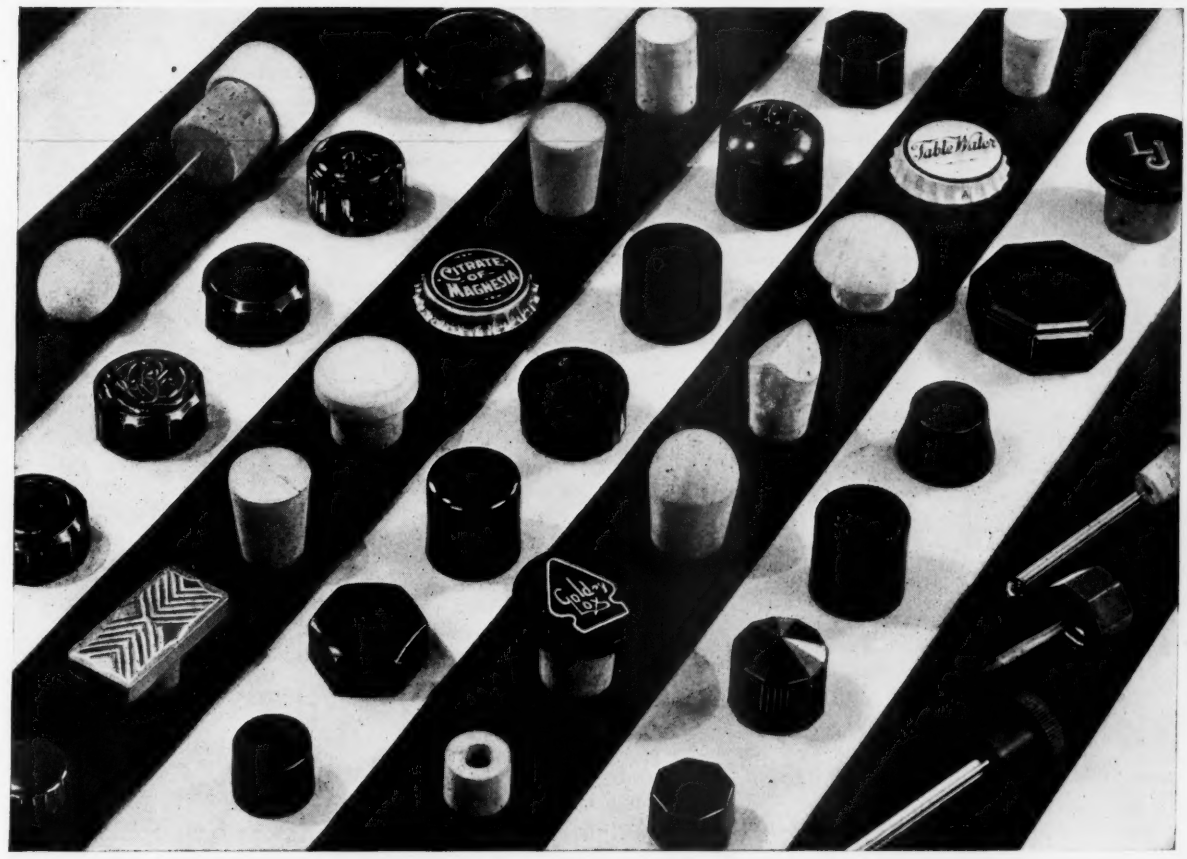
Alsop Engineering Co.
Arthur Colton Co.
Mixing Equipment Co., Inc
F. J. Stokes Machine Co.

PACKING & CARTONING

Package Machinery Co.
Stokes & Smith Co.

PHARMACEUTICAL MACHINERY

Arthur Colton Co.
F. J. Stokes Machine Co.



Select your CLOSURE *from* THIS COMPLETE LINE

WHAT'S it going to be? A molded cap? A tapered, straight, or specially shaped cork? A cork with your own design embossed in its decorated wood top? Rubber stoppers? Crowns? Applicators?

Here's every sort of closure you need. And experienced help in making your selection. Armstrong offers a complete service—a closure for every type of bottle, for every type of product. Laboratory facilities for running tests to determine which closure is best for you. And artists to suggest closure designs.

Armstrong's Artmold Caps, for example, can be fashioned in your own shape and design. Or you can choose from a variety of standard shapes. It's surprising the charm and distinction such colorful closures add to your package. The same with Armstrong's Embossed Top Corks. The "Goldey Lox" cork in the photograph shows how a hardwood top is embossed and decorated, then affixed to a high grade cork.

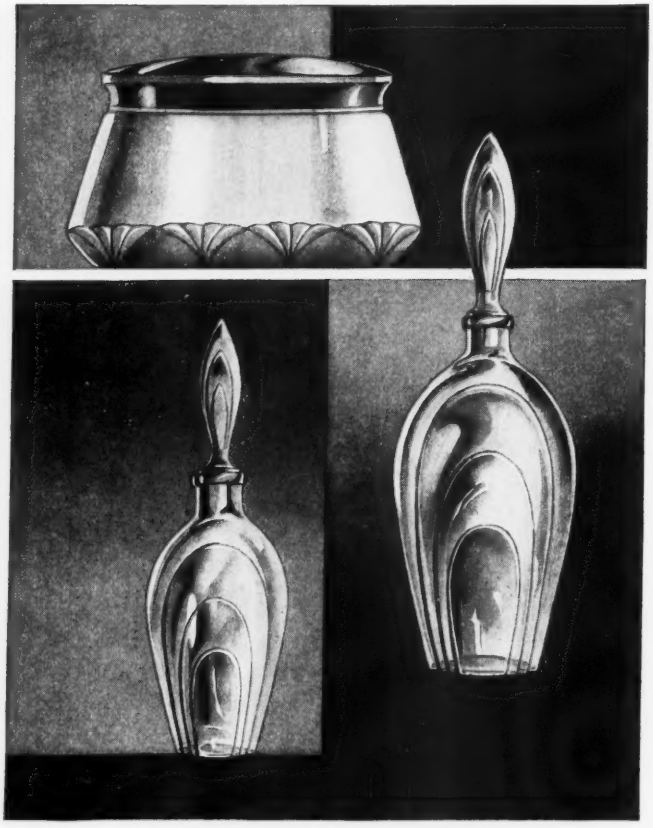
Then there are Armstrong's Corks—wedge top, round top, shell, flanged, tapered, and straight. Armstrong's Rubber Stoppers, Crowns, Daubers, and Applicators. And Du Pont Cellulose Caps in color to cover and brighten your seal whatever it is.

Send us a sample of your bottle and let us make suggestions on the design and type of closure. No obligation, of course. Address Armstrong Cork Co., 913 Arch St., Lancaster, Pa.

Armstrong's Closures

CORKS OF ALL KINDS . . . ARTMOLD CAPS . . . EMBOSSED TOP CORKS . . . DAUBERS . . . CROWNS . . . CELLULOSE CAPS
CELLULOSE BEVERAGE BANDS . . . APPLICATORS OF ALL KINDS . . . RUBBER STOPPERS . . . CAP LINERS . . . BUNGS

Century-old craftsmanship bringing new beauty to you



The powder jar and perfume flaconnettes illustrated above typify the grace and beauty of Owens-Illinois hand-blown ware.

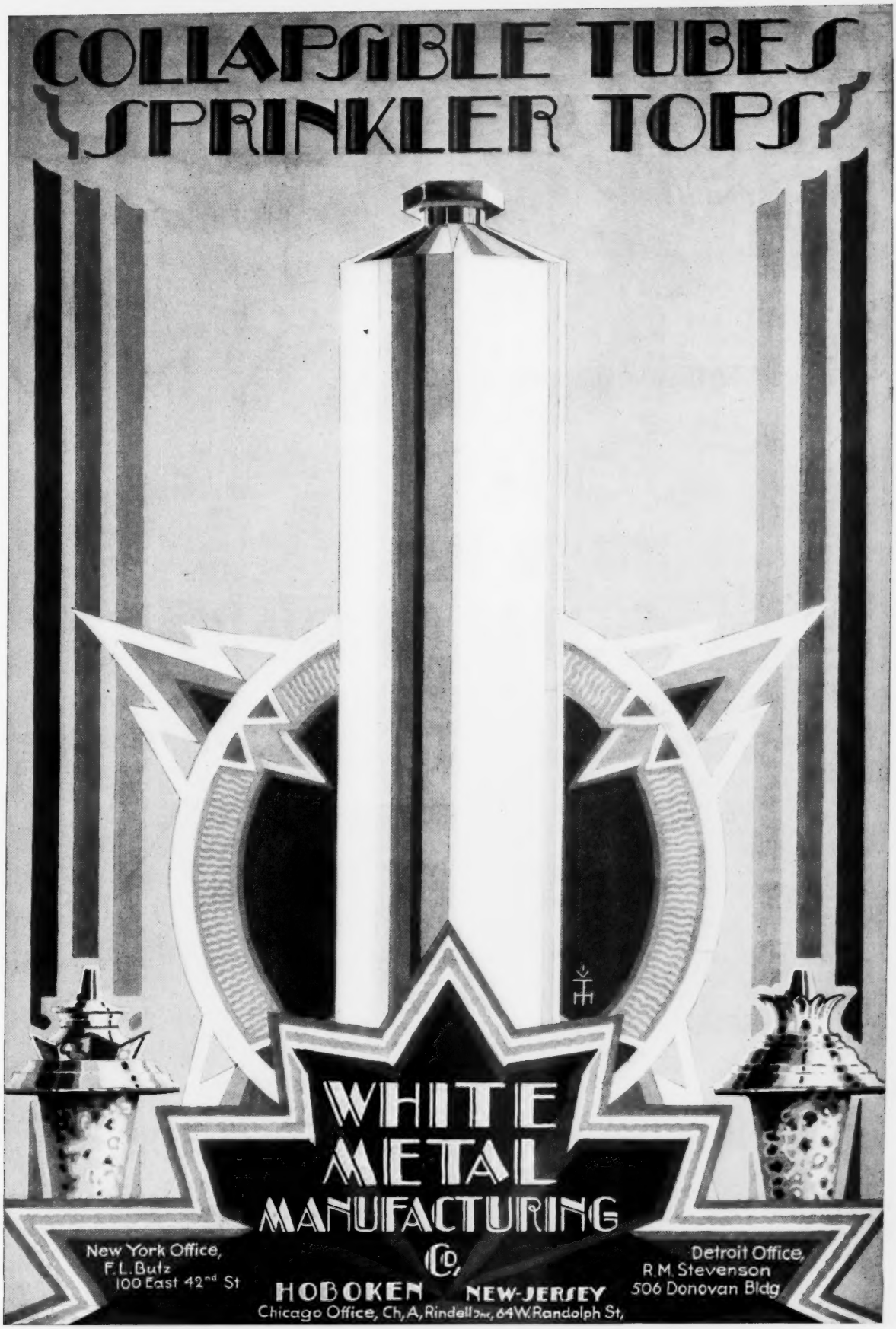
IN a plant devoted exclusively to the ancient art of hand-blown glass manufacture, Owens-Illinois craftsmen are bringing you containers of sparkling new beauty. And to insure that the high order of their craftsmanship shall be perpetuated, we are continually training new glass blowers to carry on the work.

The Owens-Illinois hand-blown plant differs from all others in that it has at its disposal the same central research, design and engineering facilities as our eighteen other plants.

No expense has been spared to produce glass of clarity and quality worthy of the artistry that shapes it. Extremely attractive containers in a wide variety of colors are being delivered from this plant. We shall be glad to submit samples of our hand-blown ware for comparison with any other made here or abroad. Owens-Illinois Glass Company, Toledo, Ohio.

OWENS-ILLINOIS

HAND-BLOWN WARE


COLLAPSIBLE TUBES
SPRINKLER TOPS
WHITE
METAL
MANUFACTURING
CO.
HOBOKEN NEW-JERSEY
New York Office,
F.L. Butz
100 East 42nd St
Detroit Office,
R.M. Stevenson
506 Donovan Bldg
Chicago Office, Ch, A, Rindell Inc, 64 W. Randolph St,

LET US COLLECT

YOUR BAD OUTSTANDING ACCOUNTS

WE ARE REPRESENTED THROUGHOUT THE WORLD

No Charge Unless Successful

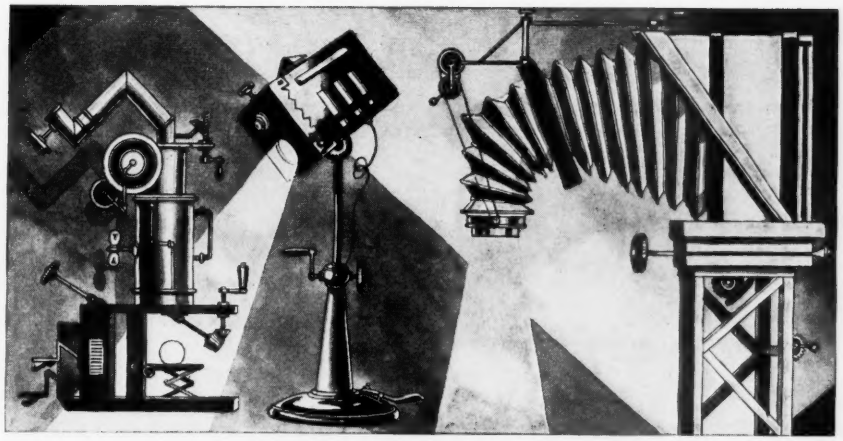
Call or Write

INDUSTRIAL CREDIT ASSOCIATION

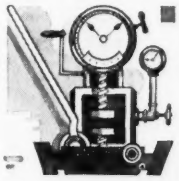
154 NASSAU STREET

NEW YORK CITY

BEekman 3-5756



PHOTOMICROGRAPHY is used in certain industries to study the molecular structure of raw materials and finished product. Enlarged one thousand times, a piece of steel resembles an acre of plowed ground.



And, an eighth-inch of finely woven silk takes on the appearance of a barbed wire entanglement.

Other strange instruments and recording devices have been brought into play in recent years to determine hardness, elasticity, compressibility, resistance to heat, moisture, acids, and what-not. There seems no limit to the application of laboratory methods, or the experimental processes of men of science, to the prosaic (so-called) manufacturing industry.

All of which, no doubt, serves a very useful and profitable purpose when controlled with ordinary restraint and plain old-fashioned common sense. But where to draw the line.

In the hands of men of small-learning or the charlatan, testing equipment may be used to prove anything that the operator wills. It will lie with the same ease and grace as a clever advertisement or a smug salesman. Then, too, there are few people trained to read the photomicrograph or make accurate determinations from tests which are seemingly surface-simple.

One photomicrograph of an eighth-inch of material, or one test made at four o'clock some Thursday when the sun isn't shining is hardly a fair comparison. More, much more, depends upon who is making the test . . .and what is back of it.

But what is the safe and sane path for the conscientious buyer to traverse in the wilderness of claims, promises, cut prices, concessions, etc.? To many it is a daily, never-ending problem. I've been buying and selling a good many years . . . my opinion, perhaps, is no better than thousands of others . . . but I know of no surer way than to search out the manufacturer who has a reputation for fair dealing, then place yourself entirely in his hands. It seldom fails.

Dart Smith

MEN and machines that dissect a raw material or finished product, uncover inherent weaknesses and then provide suitable correction, fill an important niche in industry.

Much, or little, may be made of this fact. But there seems small need of organized ballyhoo as to the methods used, who perfected them, and why. All things working in their normal groove of efficiency the product will speak for itself . . . with improved appearance or with ability to perform its work better than before.

Many methods are used in the testing of raw materials through the various processes of manufacture until they finally become PHOENIX *Metal Caps*. That we set certain manufacturing equipment with the aid of a mechanical eye . . . that use a machine which, in effect, permits us to see through a metal cap on a glass bottle and determine accuracy of fit . . . are but a means to an end, rather than the end itself.

Of course such methods have a direct bearing upon the quality of PHOENIX *Metal Caps*. But we make no especial effort to dramatize these details of manufacture. We believe that the quality of PHOENIX *Metal Caps* should be obvious to all buyers who give more than ordinary consideration to the purchase of packaging supplies. May we send you samples?

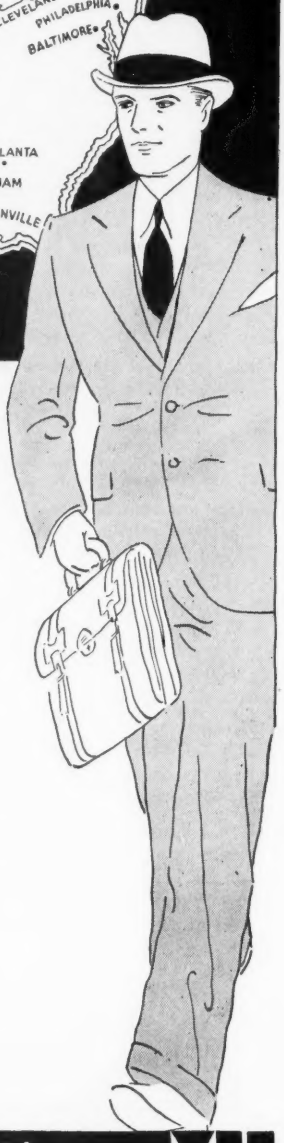
PHOENIX-HERMETIC COMPANY
Metal Caps for Glass Packages
CHICAGO NEW YORK

Offices: New York, Philadelphia, Boston, Chicago, San Francisco, Los Angeles, Cleveland, Cincinnati, St. Louis
Plants: 2444 W. 16th St., Chicago; 14th Ave. and 38th St., Brooklyn

The C T Screw Cap

PHOENIX *Metal Caps*

When Closures are the Question
Call in the C.C.S. Salesman



Write, wire or phone the office nearest you.

ATLANTA, GA.
55 Forsyth St., S. W.

BALTIMORE, MD.
Eastern Ave. & Kresson St.

BIRMINGHAM, ALA.
2305-2307 Morris Ave.

BOSTON, MASS.
143 Sidney St.
Cambridge, Mass.

CHICAGO, ILL.
1346-1354 Northbranch St.

CINCINNATI, OHIO
212-214 E. Third St.

CLEVELAND, OHIO
2106 W. Superior Viaduct

DALLAS, TEXAS
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DENVER, COLO.
1700 16th St.

DETROIT, MICH.
2179 Franklin St.

HOUSTON, TEXAS
1011-13 N. San Jacinto St.

JACKSONVILLE, FLA.
P. O. Box 2278, Sta. A

KANSAS CITY, MO.
500 Delaware St.

LOS ANGELES, CAL.
603 West 53rd St.

NEW ORLEANS, LA.
518 Howard Ave.

NEW YORK, N. Y.
219 36th St.
Bush Terminal Bldg. No. 3, Brooklyn, N. Y.

OMAHA, NEB.
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PHILADELPHIA, PA.
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ST. LOUIS, MO.
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7211 Delmar Blvd.

SAN FRANCISCO, CAL.
182 Second St.

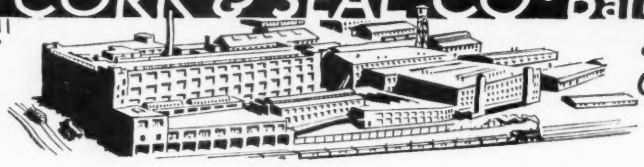
HE is a closure specialist whose job is to serve rather than sell. He is sincerely interested in helping you determine the most satisfactory and economical method of sealing— in providing you with the *right* closure for *your product.*

He also offers you the advantages of Crown Cork & Seal's great resources—the largest plant of its kind in the world—20 branch warehouses, strategically located to insure you of prompt delivery, even on short notice—a splendidly equipped research laboratory to solve difficult sealing problems—a capable art department to create and execute individual designs.

Whenever the question of closures comes up, phone the nearest C. C. S. office. It is the quickest and surest way to obtain satisfactory, economical sealing for your product.

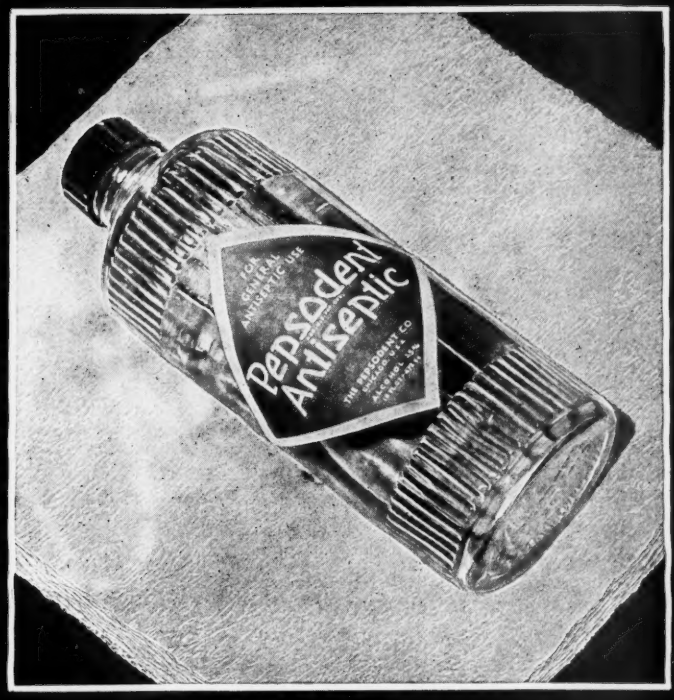
CROWN CORK & SEAL CO. Baltimore Md.

WORLD'S LARGEST MAKERS OF—



CLOSURES FOR GLASS CONTAINERS

How Pepsodent Antiseptic is making its mail-sampling *an amazing success*



A Million Bottles
Cushioned in Kimpak

Pepsodent Antiseptic has jumped to national success almost overnight. Extensive mail-sampling has speeded this success. Here is Kimpak's part:

SAVES BREAKAGE
Kimpak provides a resilient "cushion" . . . maximum assurance against breakage in transit.

SUPER ABSORBENT
Far exceeds postal requirements. Absorbs 16 times its weight in moisture. We will gladly send you the results of tests made in co-operation with the Post Office Dept. at Washington.

SAVES POSTAGE
Kimpak is so light in weight that considerable postage savings are usually effected.

SAVES TIME
Pads of Kimpak are so convenient that packing labor and time are reduced.

ECONOMICAL
Surprisingly low in cost, because of its bulk and lightness. Kimpak is 100% pure and *clean* . . . as befits the packing of a pharmaceutical product. When the package is opened in a doctor's office, dentist's office or home, its neat appearance *adds* to the quality impression.

Kimpak will save money . . . and make money for you

IT is the new idea in protective packing materials! Doing away with sawdust, linters and low-grade packing materials—*yet with surprising economies.*

Many hundreds of products are now Kimpak-protected, in addition to liquids and fragile articles: cosmetics, vanities, wood and metal products with fine finishes that deserve *Kimpak's super care in transit. Kimpak plays a part in the* success of low cost merchandise, too. It comes in rolls, *sheets or pads, in any thickness—plain or backed with various* paper stocks. Use the coupon for free samples.

Kimpak

REG. U.S. PAT. OFF. & FOREIGN COUNTRIES

Crepe Wadding

MAIL COUPON
(Attached to your letterhead)
FOR FREE SAMPLES

Tell us what your products are. If possible, send *samples. We will return them to you promptly,* "*Kimpakd*", together with prices and full *information.*

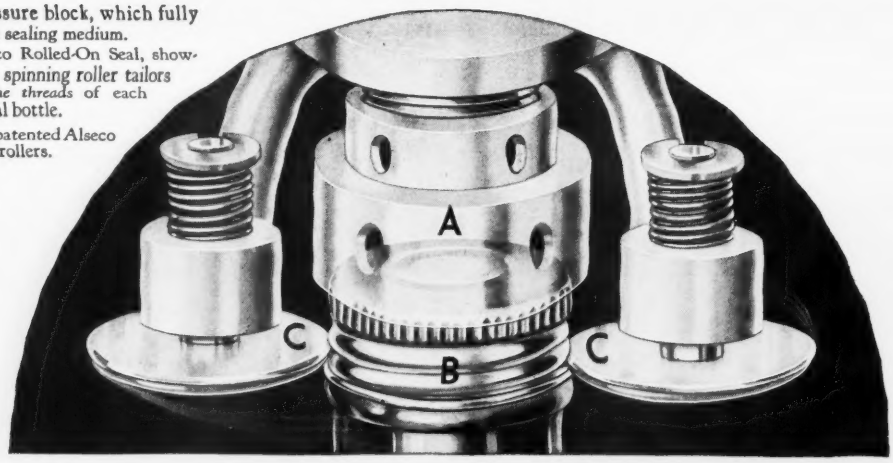
DM-8

Kimberly-Clark Corporation, Mfrs., Neenah, Wis.
Address nearest sales office at
8 S. Michigan Ave., Chicago *122 E. 42nd St., New York*
Please send samples of Kimpak, prices and full information.

Our products are.....
☐ We are sending samples to be repacked and returned to us.

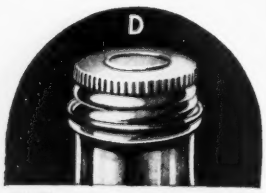
Firm Name .....
Address.....
City.....
Attention of.....

(A) Pressure block, which fully seats the sealing medium.
(B) Alseco Rolled-On Seal, showing how spinning roller tailors it *into the threads* of each individual bottle.
(C) The patented Alseco spinning rollers.

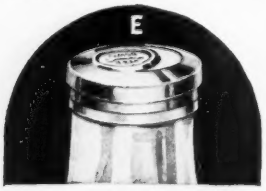


Alseco seals and machines prevent "leakers" and "breathers"

Let us prove this to you . . . . . .



(D) The spinning rollers tailor the plain skirt of Alseco Rolled-On Seals *into the threads* of each individual bottle. Alseco Rolled-On Seals made of Alcoa Aluminum provide an initial hermetic seal that consumers can easily open and tightly re-seal.



(E) *Alseco Tamper-proof Goldy Seals for small or large containers.*

These seals are especially adapted to vacuum closing, single-dose containers. With slight adjustments all Alseco Capping Machines will apply Goldy Seals. As the illustration shows, plain skirt of the Alseco Goldy Seal is tailored *under the locking ring* of each individual bottle.

Let us demonstrate to you that "leakers" and "breathers" can be overcome. Let us set up an Alseco Capping Machine right in your plant. We'll furnish Alseco Seals and an operator free.

After the trial run is made you can give the Alseco capped packages any test you desire. Turn them "bottoms up," shake them violently at any angle, incubate them. Not a "leaker" or a "breather" will show up, for two reasons, both inherent in the patented Alseco Machines and the tailored-to-fit Alseco Seals.

All Alseco Machines insure non-leak sealing, are fool-proof and operate on the same sound and simple principle. First the seal, with plain skirt, is properly seated on the sealing surface of the bottle. The correct amount of vertical stationary top pressure is applied by the pressure block. Then, with the sealing medium held under constant pressure, the spinning wheels tailor the skirt of the Alseco Rolled-On Seal *into the threads* of each individual bottle.

Alseco Capping Machines are easily interchangeable to various heights and sizes of containers. Several types of machines are available with a capping speed of from 15 to 130 containers per minute. Automatic and non-automatic machines are available. Both handle a range of containers from gallon jugs to one ounce bottles. Efficient vacuum applying machines are also available.

Compare these machines and seals against any others that you are now using or propose to use. Request an Alseco demonstration today. Use the coupon if you wish. ALUMINUM SEAL COMPANY; NEW KENSINGTON, PENNSYLVANIA.

ALSECO

Seals and Capping Machines

ALUMINUM SEAL COMPANY,
New Kensington, Pa.

I am interested in a demonstration of Alseco Seals and Capping Machines.

*Name*_____
*Street and Number*_____
*City*_____ *State*_____
*Name of Company*_____
*Position*_____

COLOR AND DESIGN CAN MAKE A MIGHTY DIFFERENCE!

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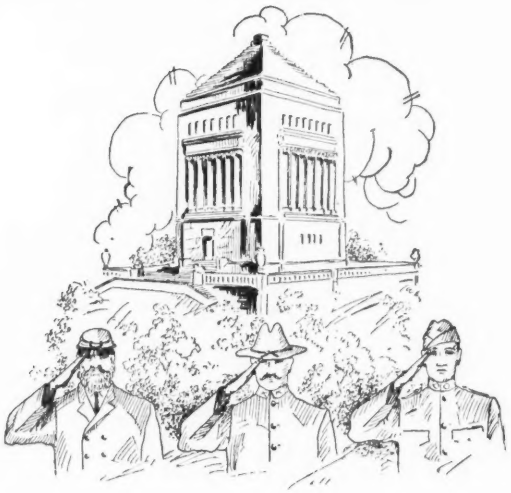
VETERANS

51 Iodine Derivatives



In 1870---before modern purity standards had been established---Mallinckrodt iodine derivatives began to be recognized for their excellence. At that time just a few were produced but with the advance of medicine and industry the need for new Iodine compounds was met by the Mallinckrodt Laboratory.

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Acid Hydriodic
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Ammonium Iodide
Barium Iodide
Bismuth Subiodide
Cadmium Iodide
Calcium Iodide
Copper Iodide
Ethyl Iodide
Iron Iodide Saccharated
Lead Iodide
Lime Iodized Dark
Lithium Iodide
Magnesium Iodide
Mercury & Potassium Iodide
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Drug Markets

Vol. XXIX AUGUST 1931 No. 2

Ergot in U. S. P. X.

It is indeed sad that the Food and Drug Administration can get into so many complications in its enforcement of the specifications of the Pharmacopoeia. However, it is pleasant to reflect how well the very large part of the Pharmacopoeia is prepared and how a real careful reading of most of the monographs generally results in a clear cut standard. It is generally the case in most disputes regarding the Pharmacopoeia standards that someone has not carefully read and digested every word of the monograph covering the article in dispute. Surely it appears that if the Administration had carefully read and digested every word of the monograph on ergot in U. S. P. X, there would now be no dispute between the Administration and the manufacturers.

The Food and Drug Administration is legally minded since its Director is by profession a lawyer. It is also medically minded since the Chief of Drug Control is a physician. The surprising fact about the Administration's legal mindedness is the fact that a lawyer can disregard definite statements to such an extent. The surprising fact about the Administration's medical mindedness is that it can make statements regarding label strength that do not conform with the accepted ideas of the group in control of the American Medical Association Council on Pharmacy and Chemistry.

To our mind the ergot monograph in U. S. P. X is clear. There is no reason why it should be misunderstood by the Administration and applied in a manner that causes the potency of the standard to increase by as much as twenty-five per cent a year. And there is certainly no reason why the Administration—having incorrectly applied the standard in this manner—should attempt to justify a wide variation in U. S. P. potency of ergot, when the A. M. A. drops products from its accepted list for just such variations.

Evidently the Revision Committee of U. S. P. X was careful to write the ergot monograph so as to prevent the occurance of such a condition. That the Food and Drug Administration should cling to an incorrect application of this monograph and refuse to admit its error is disgraceful. While interim revision is most desirable to correct Pharmacopoeia errors and to take advantage of more recent knowledge, there is no reason to rush into interim revision when knowledge has not advanced appreciably, and when the ridiculous condition of a constantly rising potency standard occurs only through unintelligent reading of a monograph carefully and properly prepared in the light of the knowledge available.

Private Brands Again Discussion concerning price maintenance legislation has now taken a new turn which tends to indicate that all is not as it should be with some of the stores who have been most successful in their ability to attract profitable business through the bait of loss leaders. Some of these merchants are said to desire a change in conditions due to the fact that the number of loss leaders is increasing, and that many more merchants are indulging in the practice so that the number of merchants making any profit is rapidly declining. Naturally this condition causes the suffering and business death rate of independent retailers to become greater.

It seems that times of depression do bring good as well as evil, and uneconomic conditions are to a large extent corrected. In this case, the condition of increased competition which has arisen is plainly the result of the trying economic conditions that now prevail. Price-cutting and sharp competition is occurring in the most prominent retail stores of all descriptions throughout the country. Prices of all types of goods are working downward, and it is only natural that drug stores should feel the result of this movement to maintain sales by lower prices.

The bright side of such a condition is that the stores which once were unchallenged in their price-cutting ability, today find their competitors meeting fire with fire to the ultimate result that something will have to be done or all will be in the same unfortunate position. Chains and cut-rate stores will be forced to deal with the independents who are in strong competitive position or both will go down together. In certain territories some semblance of price maintenance will probably develop which will be far more real and effective than any price maintenance ever resulting from faulty legislation such as the Capper Kelly Bill.

But there is a definite responsibility falling upon the manufacturer in the present situation. Doubtless demands will be made upon him to bring his prices more in line with present economic conditions as indicated by the cost of natural products as well as manufactured goods. If the manufacturer is unable to aid the retailers by aiding them to cut prices through lower manufacturers' quotations, the retailers are quite apt to turn to the unknown brands as the only means of keeping themselves from being forced to the wall.

Campbell's Advice Typical of the lack of co-operative spirit possessed by the Food and Drug Administration, particularly among its head officials, is the statement of Director Campbell regarding the appeal the Administration is to take from decision adverse to the Administration's multiple seizure policy. Says Mr. Campbell:

"Manufacturers at present have a remedy against destruction of their business through multiple seizures by the Department, since they can change the labels or the ingredients of their products to conform to the Departments requirements."

Thank you Mr. Campbell. You are too kind to point out that meek submission to bureaucratic rulings will permit a man to remain ostentatiously in business although he is only choosing between what you believe to be the lesser of two evils. There is no remedy for influenza, for the common cold, for any number of other common diseases, in your opinion. Yet the manufacturers of these products after stripping their packages and labels of all statements indicating the correct application of their products can continue in business if they make no claims.

From your line of reasoning why bother at all to call a product a medicine. Just give it a fanciful name and sell to anyone who will buy it. Under such conditions, since the manufacturer would not call it a drug or a medicine, the Food and Drug Administration would have no jurisdiction over it. Why not advise the manufacturers in this way? It would save them a great many trips to Washington and it would save your over-worked department a great deal of effort.

• • •

Dr. Cook---Medalist We are pleased to congratulate Dr. E. Fullerton Cook on his award of the Remington Medal. There is no doubt that no one more deserving of this award could be found today. A man who has for a long time, and still is giving most unselfishly of his life to the advancement of the ideals of the profession of pharmacy, Dr. Cook completely represents the type of man for whom this award was established.

The position of Chairman of Revision which Dr. Cook filled so commendably for U. S. Pharmacopoeia X, and which he is now filling for U. S. Pharmacopoeia XI, is a trying position which can be filled successfully only by a man of high ideals who is interested not in factions of any kind, but only in what is

right in his mind. We are sure that Dr. Cook is one man who is guided in his Pharmacopoeia work only by the right as he sees it despite the efforts of selfish factions to make conditions appear otherwise.

• • •

Strategy In Cigarettes

Loud was the praise heaped on the cigarette companies for their smart method of preventing price-cutting by raising the prices to all retailers. Part of the trade press and others said this was the way to remove this terrible evil. But the fact of the matter is that while elimination of price-cutting is supposed to benefit the independents the recent advance in price reacted more to the benefit of the chains than it did to the benefit of the independent retailer.

The price of a package of cigarettes was raised by the manufacturers approximately three-fourths of a cent The chains raised their price one cent per package, giving them an increased profit on each transaction of one-quarter of a cent. But the retailers who had maintained the price at the published figure of fifteen cents per package were forced to sell at the same price and take three-quarters of a cent less profit on each package. Furthermore, prices of cigarettes are not being maintained at fifteen cents.

Increased prices to all, thus cutting the profit of the independent retailer, is certainly not the type of remedy which the independent retailer wants applied. And since the independent is the one who cries most loudly for price maintenance and since he is the one who many believe will benefit most, the precedent of the cigarette manufacturers is not one which the drug manufacturers should follow.

• • •

Quinine Prices

A reduction in quinine is not such a usual occurrence that it should pass without comment Many incorrect deductions might be drawn from the action of the Dutch quinine monopoly reducing its quotations by four cents per ounce as a result of sharp selling competition from an independent quinine manufacturer.

In the first place the recognition of the competition in this market does not mean the beginning of the end of the quinine monopoly. The cinchona bark from which the independent maker obtains his quinine comes from Dutch Java just as the monopoly bark does. There are always independent growers of cinchona and there are always independent quinine manufacturers to make quinine from this bark. Also there is the possibility of bark grown by estates in the Kina Bureau getting into the hands of independents. This is due to the fact that the Kina Bureau will take no more bark from a planter than the quota given him. He is not allowed to sell his surplus. Sometimes this bark is reported back to the Kina Bureau as "stolen," and thus do some independent quinine manufacturers exist.

Rather does the present reduction mean that the monopoly is going to control the quinine market in this country in good times as well as bad. If the independent makers are not able to sell their quinine by offering it in a few places, but have to offer it widely, then the disturbance created to the "official" price will be recognized and the situation corrected. But as far as can be seen at the present time there is no likelihood of the Kina Bureau allowing anyone seriously to challenge its position. The same tactics as were used in the past will probably be used again if the necessity occurs.

• • •

Business Co-operation

We see that co-operation as evidenced by trade associations, trade papers, codes of ethics and other means legitimately stimulating business activity as it is understood has come in for caustic criticism from New York's Governor and Presidential aspirant Franklin D. Roosevelt. All these factors, states Mr. Roosevelt, produce a condition of gross over-production without any definite planning. Planning, states Mr. Roosevelt is what is needed.

Granted that we have on several occasions in this country reached a state of over-production. Granted that business activity is geared up to increase production steadily. Certainly Mr. Roosevelt can charge no business man with knowingly entering on a production program that is going to make his production sell below the cost of it. Doubtless if Mr. Roosevelt will study the various statistics compiled by the Department of Commerce he will realize that an increasing amount of facts and figures are being made available to business men in an effort to have them confine their efforts to produce those things that the country needs.

But if the business men of the country were merely to take the statistics of today and decide that the present production of any one item is all that is needed without attempting to increase the market for the product, how would this country progress ? And if trade papers, which merely reflect the thoughts of the trade, and codes of ethics, which are still

not legal, were abolished, would business ever amount to anything but a cat and dog fight ?

We believe that Mr. Roosevelt should be a little more plain as to just what form his planning will take. It is easy to criticise, but it is not easy to offer a specific remedy. If Mr. Roosevelt has in mind any concrete method of improvement, we do not think that he has made this fact clear.

• • •

Business To Be Had

Not until we have another crash will every one admit that business has reached another boom period. We have a peculiar faculty of failing to recognize abnormally good times when they are with us, and by the same token we have difficulty in recognizing normal times until they are gone. With business today advertised as scraping bottom, improvement is doubtless setting in some lines.

The coming Fall and Winter are advertised in advance as worse than the times through which we have gone. Yet there are those who will experience the best times of their business careers during this period, and the adverse advertising should not scare anyone.

Just so long as people are of the opinion that times are bad and that there is no use working for nothing, just so long are times going to continue bad for them. There will be ever so many who will go harder after business and who will succeed in increasing their business even though it is advertised in advance that business generally might decline. And it is those workers who go and get the business who will be very largely for a return to better times when these times come and are recognized. The calamity howlers will reap some of the reward of the work of the others—but not the lion's share.

• • •

Ten Years Ago

From Our Pages, August. 1921

The Barrett Co. has moved to its new building at 40 Rector st., corner West st., New York.

Enthusiastically launched by a score of the sales executives of companies representing every branch of the chemical industries, work is under way for the organization of a National Asso-c'ation of Chemical Salesmen.

Frank Blair, President of Proprietary Association, files protest brief with Ways and Means Committee of the House against medicine taxes. Business off 30 to 60 per cent in 1921.

V. Vivaudou, Inc., is being sued for $100,000 by Mlle. Desiree Lubovska, a dancer, for alleged misuse of her picture in an advertisement. The quantity of clothing worn by the plaintiff, said to be very sparse, is a point at issue.

With a view to checking the practice of adulterating castor oil before export, the Indian Government has approved of a scheme under which facilities are provided for the examination of the oil and the issue of official certificates of purity.

• • • New and Non-Official • • •

• • •

Did You Notice

The Pro-phy-lac-tic tooth brush ad which featured a man's face, instead of a woman's. This was claimed to be in answer to a plea from a male reader who wanted the company to give the men a break. But the agency's faith in female beauty was unshaken for they stated on the ad, "*We reserve the right to go back to the beauties . . . We think they have more attention value.*"

• • •

Enough To Float A Loan ?

Inspired by Canada Dry's advertising boasting that enough of its ginger ale had been sold in three months to *float*, not sink, a battleship, a demon statistician in the crude drug business has figured that enough wahoo bark has been sold by the crude drug dealers to build a canoe.

• • •

It Might Have Been a Buyer

We don't often criticize the du Ponts for their business methods for, after all, they have done pretty well, but—well, you know the fable of the mouse and the lion. Getting a camel through a needle's eye has nothing on trying to see somebody in the new consolidated New York offices in the Empire State building. As a starter, two reception clerks and two telephones would help speed things along.

• • •

Clutching At Straws

Something must be done about the lack of imagination displayed by some of our raw material merchandisers in the drug trade. Things have come to a pretty pass when one of the most fertile brains in the business falls back on a localized epidemic to substantiate higher prices on two different items. We sigh for the good old days when the boys told real stories to encourage a bull market. Maybe what the industry needs is a good scenario writer.

• • •

Explaining the Endorsement Scarcity

Having endorsed a few items, put hundreds of others on probation, and rejected practically thousands at the last meeting of the A. M. A., our energetic friend, Dr. Fishbein, evidently decided that things were at last under control. At any rate, he sailed for Europe on the first vacation over six days which he has had in the last nineteen years. (Advt.) We are glad to put our seal of endorsement on this move.

• • •

Do You Know That

"The Life and Times of Lydia E. Pinkham" is being presented by Street & Finney, New York ad agency, to all its clients, as an "incidental sketch of the development of American advertising."

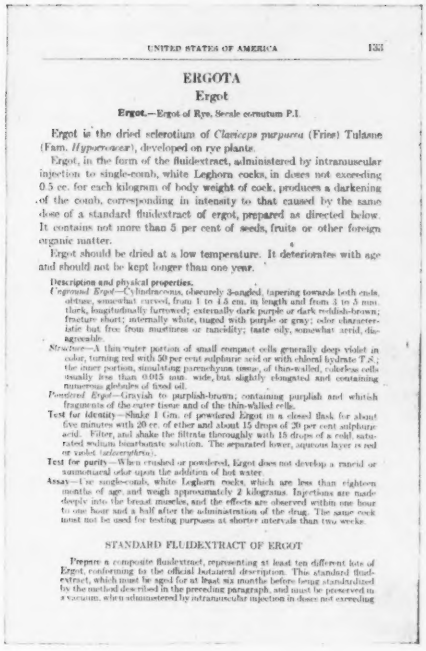
That the aforementioned lady originated "Coming Events Cast Their Shadow Before" and in many ways was the outstanding pioneer in advertising.

That the Mentholatum Co. is using what is believed to be the smallest salesman's portfolio in existence—24 pages, calling-card size.

That Billy B. Van organized the Pine Tree Products Co. in 1926 and since that time has sold soap by mail without officially going into the soap business until this year.

The Ergot Monograph

A steadily increasing potency of ergot preparations is being caused by the Food and Drug Administration's interpretation of the U. S. P. X monograph on ergot. Manufacturers want the monograph intelligently applied. The Government wants a new monograph.



UNITED STATES OF AMERICA 133

ERGOTA

Ergot

Ergot.—Ergot of Rye, Secale cornutum P.I.

Ergot is the dried sclerotium of *Claviceps purpurea* (Fries) Tulasne (Fam. *Hypocreaceae*), developed on rye plants.

Ergot, in the form of the fluidextract, administered by intramuscular injection to single-comb, white Leghorn cocks, in doses not exceeding 0.5 cc. for each kilogram of body weight of cock, produces a darkening of the comb, corresponding in intensity to that caused by the same dose of a standard fluidextract of ergot, prepared as directed below. It contains not more than 5 per cent of seeds, fruits or other foreign organic matter.

Ergot should be dried at a low temperature. It deteriorates with age and should not be kept longer than one year.

Description and physical properties.

Unground Ergot—Cylindraceous, obscurely 3-angled, tapering towards both ends, obtuse, somewhat curved, from 1 to 4.5 cm. in length and from 3 to 5 mm. thick, longitudinally furrowed; externally dark purple or dark reddish-brown; fracture short; internally white, tinged with purple or gray; odor characteristic but free from mustiness or rancidity; taste oily, somewhat acrid, disagreeable.

Structure—A thin outer portion of small compact cells generally deep violet in color, turning red with 50 per cent sulphuric acid or with chloral hydrate T.S.; the inner portion, simulating parenchyma tissue, of thin-walled, colorless cells usually less than 0.015 mm. wide, but slightly elongated and containing numerous globules of fixed oil.

Powdered Ergot—Grayish to purplish-brown; containing purplish and whitish fragments of the outer tissue and of the thin-walled cells.

Test for identity—Shake 1 Gm. of powdered Ergot in a closed flask for about five minutes with 20 cc. of ether and about 15 drops of 20 per cent sulphuric acid. Filter, and shake the filtrate thoroughly with 15 drops of a cold, saturated sodium bicarbonate solution. The separated lower, aqueous layer is red or violet (ergorubin).

Test for purity—When crushed or powdered, Ergot does not develop a rancid or ammoniacal odor upon the addition of hot water.

Assay—Use single-combs, white Leghorn cocks, which are less than eighteen months of age and weigh approximately 2 kilograms. Injections are made deeply into the breast muscles, and the effects are observed within one hour to one hour and a half after the administration of the drug. The same cock must not be used for testing purposes at shorter intervals than two weeks.

STANDARD FLUIDEXTRACT OF ERGOT

Prepare a composite fluidextract, representing at least ten different lots of Ergot, conforming to the official botanical description. The standard fluidextract, which must be aged for at least six months before being standardized by the method described in the preceding paragraph, and must be preserved in a vacuum, when administered by intramuscular injection in doses not exceeding

The Monograph in Question

THAT the matter of the application of the U. S. P. specifications for ergot by the Food and Drug Administration is far from settled came further into the light following the publication in July Drug Markets of the article "Pharmacological Assays in Dispute." Since that time opinions have come to Drug Markets which attempt to prove still more strongly that the method of the Food and Drug Administration in handling ergot is utterly incorrect. Some scientists of manufacturers' laboratories are wont to call the Administration "unintelligent"; others are reported anxious to go to court and prove the Administration legally and scientifically wrong.

From the information coming to Drug Markets the following is a typical expression of opinion:

The government officials place the responsibility for their present procedure upon the ergot monograph in the U. S. P. X. They admit that the standard for ergot is increasing in indicated potency by some 25 per cent a year, but they maintain that close adherence to the U. S. P. X monograph on ergot brings about this utterly destructive condition.

Therefore, let us look at the monograph for ergot in U. S. P. X, and we find the following definition:

"Ergot is the dried sclerotium of *Claviceps purpurea* (Fries) Tulasne (Fam. *Hypocreaceae*), developed on rye plants."

Then under the heading, "Standard Fluidextract of Ergot," we read as follows:

"Prepare a composite fluidextract, representing at least ten different lots of ergot, conforming to the official botanical description."

Intelligent application of this information to the preparation of a standard fluidextract of ergot would call for ten samples of ergot from the producing centres as it appears on the market, it is said. Only in such a manner could the standard be expected to remain approximately the same. That the ten samples obtained for preparation of a new lot of standard should not contain more than five per cent. of seeds, fruits or other foreign organic matter is proper, but that it should produce a darkening of the cock's comb, corresponding in intensity to that caused by the same dose of the standard fluidextract of ergot is not at all necessary since the lot itself is to be the standard. *To believe that directions are given for the* preparation of a standard and then the standard must *be checked against something else is to make the* directions for the preparation of the standard mean-

ingless, according to scientists. If the major requirement were that each of the ten lots of ergot selected for the preparation of a composite standard must be equal to or of greater potency than the standard already in existence, then why should ten lots be mixed, when one would do just as well? And if it is necessary to secure ten lots of ergot equal to or of greater potency than the standard fluidextract of ergot formerly prepared by this method, how was the first lot of standard prepared according to U. S. P. X when there was no standard fluidextract in existence with which to compare each of the ten lots of crude ergot?

It seems obvious, according to some, that the U. S. P. X means that the ten lots of ergot to be selected must be of average potency as the ergot appears in nature. There is no requirement that the ergot selected must pass the Food and Drug Administration requirements for import into this country. There is no requirement that the ergot selected must be secured in this country where none is produced. And if the Food and Drug Administration must select the material in this country, how do the officials ascertain that the material is not over two years old, and how do they ascertain where it comes from—or do not either of these facts matter?

Rising Standard Destructive

For officials of the Food and Drug Administration to admit that they are raising the potency of standard fluidextract by perhaps 25 per cent. a year is to admit a policy destructive to the interests of the public, physicians, and pharmacy, a manufacturer states. Such an admission also portrays the Food and Drug Administration in the light of attempting to enforce at the same time two requirements of the Pharmacopoeia, either one of which is sufficient. It is a surprising course to be followed by a government department which openly stated that it will vary from the requirements of the Pharmacopoeia when in its opinion the Pharmacopoeia is plainly in error.

Still another argument strongly tending to prove the government wrong is:

There is one part of the U. S. P. monograph on ergot which has failed to come up for discussion, but which completely disproves the contention of the government that this monograph is responsible for the raising of the potency of the ergot meeting the U.S.P. specifications, and which also proves that the government is wrong in admitting for entry most of the ergot, says a scientist.

Under the ergot description, the requirement is that: "Ergot . . . produces a darkening of the cock's comb, corresponding in intensity to that caused by the same dose of a standard fluidextract of ergot, prepared as directed below."

Note that the words "corresponding in intensity" appear. There is no authority given in this monograph for releasing *overstrength* ergot free of restrictions any more than there is for releasing *understrength* ergot free from restrictions. If the government authorities are not allowing any *understrength* material to pass for import, they should not allow *overstrength* material to pass. And if they did illegally allow this *overstrength* ergot to come into the country free from the posting of a bond and the signing of an affidavit that the goods will be used under government supervision, how can they possibly justify the use of this off-standard material for the preparation of a standard?

Standard and Description the Same

Either the ergot monograph is to be applied in practice in a reasonable manner such as will carry out the intentions of the sub-committee preparing the standard as it appears, or else the letter of the monograph must be followed in every instance. Obviously it is scientifically, legally and morally wrong to attempt to follow the letter of the instructions for the preparation of a standard, when the description is ignored to the extent that material that does not *correspond* to the standard is used for the preparation of the standard. If the method of ten lots of crude ergot is to be followed for the preparation of the standard by using ten lots in this country, then the requirement that U. S. P. crude ergot must *correspond to*, and not exceed the standard must also be followed. And once this side of the problem is appreciated, it must immediately be realized that the standard can not legally change if U. S. P. goods are used for the preparation of the standard. In other words, the description of ergot given in the monograph is naturally designed to describe the same ergot as would meet the standard fluidextract. It is not to be expected that the sub-committee drafting the monograph intended that the two should differ in any way, or is such the fact. However, the government officials are applying these two parts of the monograph in a manner which causes them to mean different things, and in a manner which causes the plainly written monograph to be meaningless and completely fail of its purpose to have a very definite and rigid standard for ergot.

It is interesting in view of the controversy between manufacturers and the Food and Drug Administration regarding the application of the ergot standard that Dr. Durrett referred to the matter of standards for ergot, digitalis, and ether in his talk at the meeting of the American Pharmaceutical Association at Miami Beach the last week in July. Showing that the matter of increased potency for ergot was on his mind, he stated that a fluidextract of ergot of 130 per cent. U. S. P. potency was not deleterious and should be permitted. This was stated as an instance of the general statement made by Durrett to the effect that in respect to some drugs, such as ether, ergot and digitalis, which drugs are likely to deteriorate following manufacture, and for the prevention of which deterioration knowledge is lacking, manufacturers should

be given a wider range of potency requirements when such variations do not endanger the public health.

Research Necessary

The statement is made that the Food and Drug Administration is having great difficulty in defending its position on ergot under the attacks of manufacturers who are unwilling to go ahead preparing the fluidextract under the conditions demanded by the Administration. It is said that the Administration realizes that ergot standard conditions are not right but that it will not change its method due to the fact that it fears attacks from another quarter. It is said that the Administration is anxious that interim revision of the ergot standard be made by the Pharmacopoeia Revision Committee so that the Administration can be set straight on ergot, and can be rid of the present criticism which might break into an open fight. Manufacturers generally are understood to be opposed to any rapid interim revision for the reason that they do not see why one method should be given up for another one when nobody knows any more about the new method than they do about the old. In other words the manufacturers are believed to be of the opinion that the present U. S. P. requirements should be intelligently applied until such time as intensive research could be carried out, which research would clear up much of the ignorance of ergot in general.

The manufacturers are said to see no reason why the Administration should need an interim revision merely because the officials have for some time followed a course which makes the pharmacopoeia appear ridiculous, when as a matter of the fact the pharmacopoeia is sound enough as far as present knowledge of ergot goes. It is the opinion of manufacturers that the Administration should reverse itself and apply the standards intelligently, rather than attempt to adhere to an unintelligent course despite the pleas of manufacturers' scientists for some time back.

Where Will Cook Stand?

In the opinion of others it is said that demands upon the U. S. P. XI Revision Committee might precipitate further disagreements, this time between the Administration and the Revision Committee. It is stated that the Administration bases its knowledge of ergot upon the work of Marvin Thompson, which work it is stated has not been properly confirmed and is open to question in some respects. It is stated as questionable as to just what position Chairman of Revision E. Fullerton Cook would take in such a matter although he has worked quite closely with the Administration in matters of this kind in the past. Dr. Cook is said to highly appreciate the efforts of the Administration and is understood often to have been anxious to see that the Administration's views were seriously considered in preparing U. S. P. standards. However, that a sharp disagreement between the Administration and Dr. Cook might result from the Administrations reported demands regarding revision of the ergot standard is hinted at by some. In such a case, it is stated, manufacturing and professional pharmacy would do well to line up with Dr. Cook who is described as one of the most conscientious workers in the interests of better pharmacy.

The position of the Food and Drug Administration with regard to changes proposed in the U. S. Pharmacopoeia was clarified somewhat in a recent talk had by Drug Markets with Dr. J. J. Durrett, Chief of Drug Control

Durrett Wants Change

"It is known," said Dr. Durrett, "that a number of monographs in the U. S. P. are clumsy, inaccurate, and out of date. It makes no difference that more research and study may be deemed desirable. No amount of research and study, even if they were to extend over a period of twenty years, would produce an absolutely perfect Pharmacopoeia. The best that it can ever be hoped to accomplish is to make it as nearly correct as practicable, in the light of present knowledge. There will always be developments in science and medicine to throw more light on the subject.

"But that is no reason for saying that no changes should be made in the meantime. Improvements in monographs, in standards, in methods, have been suggested, some by the Department of Agriculture; others by other parties interested. We know that existing standards and methods are wrong. We know that improvements can be made. We believe we have shown how and where this should be done. Once this has been shown, it is no excuse to say that nothing should be done because further consideration may bring to light still more improvements, still better methods or standards.

"The practical thing is to make corrections and improvements as soon as may be. Then later on, as future research and investigation points the way, new standards and methods now proposed can be changed, corrected, and brought up to date from time to time as may be desirable. Surely this system would be better than to continue in effect something that is unsatisfactory while searching for perfection. You will never get a perfect monograph."

Dr. Durrett explained that he was not in position to discuss the pharmacopoeial revision situation in detail, or the changes desired by the Department. He did say, however, that changes had been recommended with regard to ergot, digitalis, aconite, and nux vomica.

Packing for Export

Mr. Peehl corrects some of the false ideas of requirements for export shipping cases and gives complete information as to what the proper requirements should be.

By Carl F. Peehl*

Too few cosmetic and pharmaceutical manufacturers realize that export packing is a problem worth while investigating. How many of them know that foreign countries place a penalty on cases received improperly marked. How many know that millions of dollars are damaged or pilfered each year. All this waste in the majority of cases can be avoided by following proper methods in packing. Financially, the loss can be minimized by carrying proper insurance. There is another loss which must be considered. I am referring to the customer's good will and the loss in time in replacing broken merchandise.

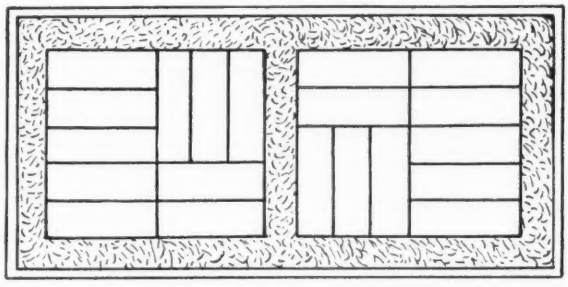
There is a mistaken idea that ordinary domestic shipping cases reinforced with wire band will be sufficient for export cases. In majority of instances this type of case is not strong enough.

There are three general types of packages that are used for exporting cosmetics: nailed boxes, wire bound set-up boxes and corrugated cases. Each kind has its use. Nailed boxes are the most common and successful container.

The lumber used is generally yellow pine (without knots if possible) of thickness varying from 5/8" to 1½" and tongued and grooved. A table is given below to help you in selecting the proper thickness of lumber:

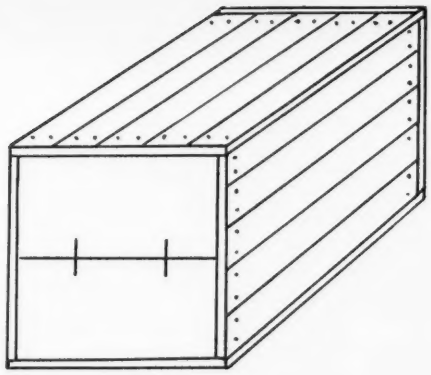
Gross Shipping Weight	*Thickness of Lumber*
Up to 150 lbs.	5/8"
Up to 400 lbs.	7/8"
Up to 600 lbs.	1¼"
Up to 800 lbs.	1½"

Lumber 7/8" with cases up to 400 lbs. is safe for cosmetics. The construction of the case can be as style No. 1 for small cases for 50 lbs. gross. The grain of the lumber runs parrelll to length on top, sides and bottom. Style No. 2 and 3 are for cases of 400 lbs. gross.

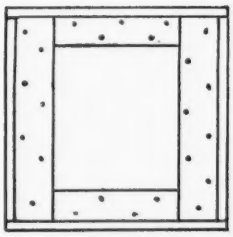


Packing corrugated in wooden case

*Marinello Company



No. 1.



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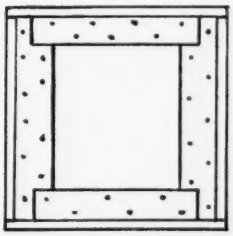

No. 3.

Grain in board runs parallel to length on top, side and bottom. Style No. 3 differs in that the batten is notched in the corners, making the case slightly more rigid. Two straps running perpendicular to the length is sufficient. Another type of construction on these cases is to have the grain of wood on sideboards run parallel to the ends. In this type of case it is absolutely necessary to have at least three straps on the case. The third strap will go around the length, holding the sideboards rigid.

For nailing, use box nails which are more slender than ordinary run of nails. An ideal nail to use would be an 8 penny box nail that has been cement coated. If the nail is too small it will not properly hold the case together. If the nails are too long, they will have a tendency to split the wood. Nails should not be spaced more than 1¾" apart. The exception to this rule is for the side board. When nailing the top or bottom board to the sides, the nails can be spaced 8" apart.

Metal bindings are made up as a wire (or several strands of wires) or as a flat metal strap. As a rule, strapping does not have to be much more than ½" wide. ¾" strap should be the maximum. Straps can be bought as plain or corrugated. If the straps are to be nailess they should be considerable distance in from the end of case. If the straps are nailed they should be as close to the ends as possible and nailed about 4" apart. The strap must be placed so that the nails will go into the ends of the case. There are a number of devises on the market that will mechanically tighten these straps.

Wire bound cases have found much favor in domestic shipments due to its lightness. Of course, it would be ideal for foreign shipments if it wasn't for the fact that they puncture easily. Although the thickness of the wood for domestic can be ⅛" to $^{3}/_{16}$", the cases for foreign must be ⅜" at least and must be tongue and groove. Personally I prefer the nailed case with the metal straps for cosmetic shipments consisting of lotions and creams. There shouldn't be any reason why a wire bound case can not be designed to fit your need. If this type of case is selected for export work, the case manufacturers must be consulted in order to design the proper case.

Fibre boxes have been successfully used in shipments of soap. It is not recommended for the regular lotion and cream shipments. As in the case of wire bound cases, the manufacturer should make the necessary tests together with the prospective customer in order to choose a case of proper strength. Avoid fibre cases for export unless used for shipments of large quantities of soap.

The sizes of case or fibre box depends on the individual packages. Try various sizes of cases, packing the popular items. In this way you can arrive at one or possibly two sizes of the cases that will most nearly fit all packages. There is one important point to remember in selecting this case and that is to not have the case too large.

The gross weight should not exceed 400 lbs. A case weighing around 300 lbs. is preferable. One case that has been successful measures length 38", width 22", depth 20" and thickness ⅞".

The internal packing is very important. The case must be lined with waterproof paper, and sufficient paper used to completely cover all merchandise. This will protect the goods from dampness which is common in all marine shipments. The cost of the paper is very small. It is practically necessary in shipments of powder and bath salts.

The next step in packing is to use either excelsior or shredded parchment. Shredded parchment will keep a shipment cleaner and a shipping room cleaner. The one argument against excelsior has been the amount of dust that is present when using it. Concerns slightly dampen the excelsior to prevent dust from flying around. Insurance companies make the statement that excelsior is preferably due to having more resilience than shredded parchment. Either one is satisfactory.

In packing, you should first have a layer of excelsior or shredded parchment on the bottom. If packing cream jars that are packed in corrugated cases, you

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Tuft of garden lavender cultivated widely in France

Lavender

DISTILLATION of the lavender, aromatic plant so well known to the trade and the layman, has for this season in countries like France just terminated. Its very name conjures up all sorts of things. During the past year or so, due to the general crisis, lavender oil has seen a decided drop, with the result that a number of the growers neglected its culture this year in France. As was pointed out in Drug Markets just a year ago, a great deal of lavender was planted in France when overproduction in wheat made its appearance. Discouraged over the wheat situation, agriculturists in certain sections of France thought that lavender spelled big profits. The consequence was, too many lavender plantations. This condition of things, together with the oncoming economic crisis and consequent drop in consumption of lavender products, quite naturally resulted in over-production. There was some movement during this year in certain sections, and comparatively few hold-over stocks remained when the new crop of lavender was ready for distillation. These stocks were, in some instances,

A lavender distilling post in the mountains of Southern France

Lavender plantation at Puberclaire in Southern France

however, large enough to create no particular movement either way. At the present writing conditions are quiet and calm. This condition may, of course, change from one moment to another, particularly in view of contracts to be placed during the coming months for lavender products. Underselling has been scrupulously avoided, wherever possible, in order to maintain the market on a relatively even keel.

But market conditions concerning lavender are taken up in the market report appearing elsewhere in this issue, and this, the first installment of an article on the lavender plant as such, deals with the general aspects of this highly important culture, particularly as it is found in France and in England, two countries producing considerable amounts of lavender and lavender products.

The lavender plant has grown wild on the mountain slopes of the Grasse region for centuries, with no date for its introduction as in the case of some of the other cultures now so widely grown in that section of Southern France, like the jasmine or the orange flower. Often confused with aspic, or spike-lavender, mention of lavender as an aromatic plant may be found in the most ancient works. In the Grasse region the natives for many years distilled the lavender in alambics over an open fire, these alambics being carried from one mountain plantation to another. And although the most modern types of distillation have replaced many of these alambics, still one can find throughout the lavender regions of Southern France natives who continue this method of handling the annual lavender crop.

Insofar as France is concerned, and particularly the vicinity of Grasse, the plateaux of Malle and Caussols, the slopes of the Gorges du Loup, Cipiéres, Grèoliéres, produce a lavender that yields an oil reflecting the soil, this strong odor being desired for certain uses. On the other hand, the highest sections of the arrondissement, Sèranon, Saint-Auban, etc., yield oils rich in ethers of excellent odor, comparing very favorably with the oils secured from other lavender districts of France. Production in the Grasse region used to be estimated at 5,000 kilograms of lavender oil. The price for the oil was quoted at about 35 francs per kilogram before the war, and in 1927 at approximately 200 francs. Prices at the present time vary between 80 and 110 francs per kilogram.

During the past few years everything possible has been done to increase the use of lavender products, and today the employment of lavender oil in branches like those coming under the heads pharmacy and medicine opens up some interesting avenues of approach. The soap-making industry takes large quantities of lavender, and it was stated last season by some of the largest distilling perfumers that it was only the soap manufactories who bought in any quantities worth while.

A number of very interesting works on lavender have appeared in the last several years, among them being one that is of great interest to the trade, namely the treatise on lavender by J. Rodié, Chemical Engineer. Recently almost an entire issue of "Les Parfums de France" was dedicated to the lavender plant and the uses of the various lavender products.

According to Rodié, the word lavender, botanically speaking, designates only one kind or species, namely the *Lavandula vera* of De Candolle, called before that by Chaix, in 1786, *Lavandula officinalis*, and back in 1753 by Linné, *Lavandula spica, variété*. This species of *Lavandula* is, therefore, considered to be the only one entitled to carry the name lavaender. It is further pointed out that this is true also from an industrial point of view, due to the fact that it is the only species which produces, without any fraud or adulteration, a true oil of lavender. As it will be seen, science confirms the opinion of industry, and vice-versa.

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The Dentist and Pharmaceuticals

How the dentist ranks as a pharmaceutical prospect worthy of cultivation by drug manufacturers is a question that comes into the mind of almost every manufacturer at one time or another. It is answered well by Dr. Kirby.

By Frank B. Kirby, M. D.*

NATURALLY the first procedure in a study of a problem like this is a survey of the potentials. It is assumed that matured conclusions and expert advice are not so much desired as the basic figures covering the dental profession and present day trends of thought as will help evaluate the commercial possibilities in a satisfactory relation between a pharaceutical manufacturer and a dental clientele.

There are in this country about 67,000 dentists, scattered as should be expected, but with some irregularities as regards population. For instance, New York City with about twice the population of Chicago, has 3,750 dentists as against Chicago's 3,200. Detroit, while somewhat exceeding Los Angeles in population, has 1,040 dentists, whereas Los Angeles has 1,200. Boston lists 1,200 and Philadelphia has 1,700.

The hospitals of the country, while generally well organized as to medical internes and nurses, seldom have any probation for either a dental interne or even a dental staff member. There are, however, 37 State Hospitals with one or more dentists on full time duty. This might easily be expected as such hospitals are usually very large, housing thousand of patients and employees and sometimes distant from a large city, therefore having no efficient dental service within call.

Our commercial institutions seem to more clearly recognize the value and importance of dental service to their employees. It appears that 91 industrial concerns, with a total of 400,000 employees, have dental dispensaries employing a total of 164 dentists.

The dental profession is being recruited yearly by about 2,700 graduates from 42 colleges. There were 2,503 dental graduates in 1928 of which 110 were women. The study course is varied between four and six years. These colleges are generally endowed either from previous faculty members or interested lay friends who recognize the importance of dentistry and in this way aim to guarantee it future.

Besides a wide circlation of 69 dental journals published in the United States, there is a splendid library of dental books with, in one dental college, as many as 13,000 volumes, including 2,000 in foreign languages.

Some dental colleges are organized to graduate not only dentists but dental assistants and a third group-dental hygienists. There are 15 dental hygienist schools of record and a graduate list of 2,568, which class must be considered in your promotion work. This group is a most valuable asset to the dentists employing them and to the pharmaceutical manufacturer as well.

The above survey is enough to help recognize that the dental profession is here to stay, well organized

*Sales Manager, Abbott Laboratories

and fundamentally sound and differentiated from the veterinary profession whose colleges, graduates and practitioners within recent years have been decreasing in proportion as we have seen the automotive industry increase.

Now as to the extent to which the dentist is a pharmaceutical prospect, it is interesting to note 71 U. S. P. and N. F. products suggested by Prof. Schicks as of use to dentists, as reported in the "Druggists Circular" for October, 1930. All of these 71 products may be used. Some of them are seldom used, and, of course, all told, the tonnage is not very great. However, like comparing diamonds with coal, (both chemically identical), the small volume compares favorably in value because of the larger price for the smaller unit sale. We quote dentists in ounces—not pints, grams—not kilos.

To generalize, the suggested U. S. P. and N. F. pharmaceuticals listed as above include germicides, pulp varnish, impression material, flavoring agents, anesthetics, analgesics, hypnotics, tooth powders, sprays and mouth washes. A good sized dental directory carries a special advertising section listing 28 concerns as manufacturers of dental pharmaceuticals. Only a few were recognized as distinctly dental. The conclusion is that the *controllable* volume of such business is not sufficiently attractive to make such specializing profitable. In fact, calling one such house, whose name we are not at liberty to disclose, they graciously conceded that their established method of sales promotion was not satisfactory to either themselves or the dental trade people, nor were they in position to make any change.

Drug Sales Not Large

Another house also preferred not to be quoted and remarked that their pharmaceutical sales alone would not support them, although they were well and favourably known by years of extensive advertising and fair dealing.

This house uses a 44-page catalogue of which only two pages comprise their dental pharmaceuticals, each offered in ½ ounce and one-ounce bottles. We quote a letter from them which reads:

> "The average practitioner will not order ordinary drugs and chemicals for chair use to exceed a couple of dollars per year. Most of these drugs are usually bought from the retail druggist."

The following list was copied from the drug cabinet of an active specialist in down town Chicago.

Phenol	Mercurochromoe	Zinc Sulphate
Tr. Iodine	Arsenicals	Ether
Silver Nitrate	Arsenic & Glycerin	Choloroform
Chromic Acid	Carbo Eugenol	Creosote
Copper Sulphate	Eugenol	Oil of Cloves

There are, of course, the outstanding successes of the Metz Novocaine and the Cook Carpule.

The J. Bird Moyer Company, probably by a considerable margin the largest makers of dental pharmaceuticals in the world, says that "dentists do not carry to exceed five to ten pharmaceuticals. Of these, probably only three or four are used daily."

We carried on a most interesting personal study of a unique experiment in the public schools of Gary, Indiana. Thanks are due to O. B. Nesbit, M. D., Director of Medical Inspection, for his appreciated courtesies.

Chemical Experience

To be brief, 11,000 school children from the kindergarten to grade 5, voluntarily paid $11,000 which entitles each child (at $1.00 a year) to examination by a full time school dentist and prophylaxis by the dental hygienist. It was interesting to see the children scrap for turns in the chair. Of this $11,000, the school dentists are paid $4,000; hygienists, $3,500; clerks, about $1,200, leaving about $2,300, or an average of 21 cents per child, per year, for supplies.

The work comprises examinations, teeth-cleaning and polishing, gum-boils treated, extractions and advice regarding fillings and 23,000 treatments for toothaches.

Dr. Nesbit kindly substituted the list of drugs used:

Oil of Cloves	1 pound
Ethyl Chloride	72-80 gm. tubes
Eugenol	12-oz.
Hydrogen Peroxide	6 1-pound bottles
Copper Cement	6 pkgs. cement and six liquid
Prepared Chalk	5 pounds
Pumice	35 pounds
Mercury	1 pound
Iodine, 3%	1 quart
Condit's Ammoniacal Silver Nitrate	72 pkgs. 12 ampoules each.

Of course, the above bears no relation to the amount of drugs used by the profession by-and-large, but indicates increasing interest in dental work as children are now taught in a practical way this important part of hygiene.

A recent article by Prof. A. W. Bryan, of the College of Dentistry of the University of Iowa, on "Teaching Therapeutics to the Dental Student," indicates a trend in the thought of the profession sure to lead to bigger, better things.

This brings us to the four methods by which the dentist is a pharmaceutical prospect. First, by the use of drugs at the chair; second, prescribing; third, dispensing, fourth recommending.

It would seem that certain abuses have arisen in the relations between dentists and drug houses by which the American Dental Association recently established a Council on Dental Therapeutics, patterned closely after the Council on Pharmacy and Chemistry of the American Medical Association.

It all depends on the point of view, whether a particular product and the relations of a house to dental prospects require the support that follows acceptance or approval by the Council on Dental Therapeutics. There are all shades of opinion on this. An interview with another concern advertising only to the dental

profession, while claiming they were driving many patients to many dentists, brought out considerable opposition to these requirements.

The answer to the question as applied to any firm rests on whether the product or line to be promoted is of service to dentists in one or several of the above mentioned ways. Naturally, working on so small an object as a tooth, the volume of drug used at the chair is limited. On the other hand, sprays, nebculas and mouth washes run to considerable quantity, but even their big volume depends on the product and your promotion program, and an "Amos'n Andy" broadcast has nothing to do with the matter as our study is limited to 67,000 dentists and not 120,000,000 Americans.

Dentist Prescribes

The dentist does prescribe and will probably prescribe still more following the Dental Council activit and assurances by which the field is still open for some outstanding sccesses on distinctly dental prescription products.

An interesting experiment or drive was recently put on by the Iodine Educational Bureau of New York City which will prove in an ethical way the value of recommendation by dentists at large. The plan includes rather wide dental journal publicity to an approved mouth-wash prescription, to be made extemporaneously by any druggist on printed prescriptions furnished by the Bureau to any dentist asking for them. These prescriptions, given to the patient, are in effect a recommendation by the dentist to his patient covering that particular formula.

So much for office use and prescribing. When it comes to dispensing, there are no large dental dispensers. By far the larger percentage of dental patients are ambulant cases able to call on the dentist. Therefore, the advisability of office treatments at short intervals. In this way such pharmaceuticals as are indicated are applied by the dentist with the patient in the chair. There is little excuse for and little to be gained by dispensing except a half dozen or less tablets for pain or insomnia.

Patients have not been trained to expect the dentist to recommend more than a certain tooth brush or mouth wash or dentifrice.

This brings to light the fourth and last method by which the dentist is a pharmaceutical prospect and it is a most valuable one. In the practice of medicine, physicians have not done much by way of recommending. Dentists do considerable of promotional value in this way.

The financial value of recommendation by dentists was forcefully brought out in the two-page editorial on "Listerine and other mouth washes," in the Journal of the American Medical Association for April 18, 1931. In the same issue was a six column report on the study of Listerine by the Council on Pharmacy and Chemistry.

My reason for bringing this to your attention here is the answer it gives to our problem by quoting "Printer's Ink" that, with little advertising in 1929, the profits were $115,000, whereas $500,000 in advertising in 1930 earned $7,132,412.55. Of course it is a question how much of this profit may be credited to recommendation by dentists but it is no question to those of us who have watched this development—it is no question that much of this big total is a result of recommendation by dentists.

Many pharmaceuticals of more or less value have at least received their start to maturity and fame by what is effect is dental profession recommendation, as samples by the thousands have been passed out by the dentists to their patients. Generous donations of samples in quantity by generous manufacturers have shown themselves as "Bread upon the waters," and just as surely have floated back in volume sales and interesting dividends.

The dentist as a pharmaceutical prospect is an established factor in pharmaceutical practice today and given a product of merit, helpful to his patient, the dentist will gladly use at the chair, dispense, prescribe or recommend anything he conscientiously believes of benefit in the more rapid cure of his patient and anything that raises his professional prestige.

Packing for Export

(*Continued from page 127*)

place the cartons along side of one another allowing a space between the cartons and the outside of case and allowing a space in the center. You pack excelsior very tightly in this space to prevent merchandise from shifting. The reason for having a space in the center of case is to distribute the weight evenly over the case. Between each horizontal layer of cartons, you place a layer of excelsior. No package consisting of jars or bottles should be packed before they are originally packed in corrugated board.

The last, but a very important point to consider in foreign shipments is the marking of case. Do not have unnecessary markings on case. It is an American custom to have markings with letters of 1 to 1½". Foreign countries have markings of 3 to 5". There shouldn't be any markings that denote advertising. Some general rulings are:

1. Mark case "Glass, Handle with care."
2. Mark country of origin, U. S. A.
3. Number cases, 1, 2, 3, etc.
4. Mark net weight and gross weight.
5. Mark name of address of destination plainly.
6. Use large letters.

There are other special marks that are required for different countries. This information is very necessary if you're going to avoid delay.

Treating the Kidneys

Drug Control gives its conception of what types of treatment exists for this important organ of the body, and how these products may be labeled.

ONE of the latest projects undertaken by the Food and Drug Administration is checking up on bladder and kidney "cures," remedies and medicines. In taking up this work, Administration officials assert that there are no general kidney and bladder cures. They announce that the name of those organs can not properly be used in general claims on labels. Such use, it is asserted at the Department, implies to the buyer that the preparation so labeled is a remedy for any and all diseases of the organs named.

If the name of a particular disease of the kidneys or bladder is used on a label, then the Department holds that the product must be a competent remedy for that disease. And Department officials do not point to any such remedy. In pointof fact, they say that there are no drug cures for such diseases as Bright's disease and diabetes. A recent official statement has been interpreted as holding that labeled claims for those diseases are not permissible, nor is it permissible to make labeled claims as to alleged remedies for such diseases as albuminaria, cystitis, dropsy, nephritis, uremia and "prostrate disorders." But let us hear Dr. John J. Durrett, Chief of Drug Control.

"There are no drugs that are general kidney and bladder remedies," said Dr. Durrett. "You can not have such a thing. There is nothing definitely known that is good for everything the matter with the kidneys and bladder. It is not proper to label a pill as a 'kidney pill'."

This point was threshed out several years ago, it is recalled, when the Department insisted that the well known Doan's Kidney Pills were not properly labeled; that the word "kidney" should be eliminated from the title. This ruling was based on the proposition that the pills were not a competent remedy for all kidney diseases. As trade representatives understand the Department's position, it is proper to label a kidney pill as a "diuretic stimulant to or for the kidneys." It appears that there was at one time a discussion as to whether "to" or whether "for" would be the proper word. Incidentally an expression such as "diuretic stimulant for the kidneys," or "diuretic for the kidneys" might be criticized by authorities on English as representing a form of redundancy, inasmuch as the word "diuretic" is said to be directly related to the kidneys.

However that may be, trade understanding of what is a proper label for diuretic preparations seems somewhat broader than the Food and Drug Administration definition of diuretics.

"If a preparation is a diuretic in action," said Dr. Durrett, "then it is all right to label it as such, provided proper dosage is specified. It is proper to say on the label that it will 'stimulate the flow of urine.' It may not be proper to make a label claim for it that it will 'stimulate the kidneys.' Whether the secretion of urine represents all the activities of the kidneys we do not know definitely. There may be other activities that would not be stimulated by a diuretic. The latter will stimulate the kidneys to produce more urine.

"Indications are that many alleged kidney and bladder remedies that have been on the market possess diuretic properties. Such preparations, however, by no means constitute treatments for the various diseases of the kidneys and bladder, among which are some of our most serious maladies. In fact, these preparations are sometimes harmful to a person suffering from these ailments. Persons suffering from such diseases are not able as a rule to determine for themselves whether a diuretic preparation would be useless, helpful, or harmful to them.

"Under the law, however, if an article which does possess diuretic properties is labeled simply as a

diuretic, it is not misbranded. The Administration's jurisdiction ends with seeing that labels of these preparations are truthful, both literally and in the implications which their wording conveys."

There are many diuretics, Dr. Durrett pointed out. Some coal tar preparations, such as hexamethylenetetramine, are not so good diuretics, in his opinion. "There are much better ones," he remarked. "Digitalis is a good diuretic in some instances. Caffeine is a good one. Water is good for this purpose."

Many medicines have various and sundry influences upon the kidneys, the baldder and the urinary system in general, Dr. Durrett stated. He did not think it very practicable to go into a discussion, in an interview, of such treatments. There is a great multiplicity of action and of results included in their scope. He did refer very briefly to various local applications, such as cauterization, irrigations, surgery in various forms, etc. There may be gonorrheal lesions, or enlarged prostate. It may be necessary to open up a stricture or put a wedge in somewhere. A weak solution of cocaine may be proper treatment for the relief of local pain.

Control of Kidney Secretions

Asked about the possibility of drugs, and the labeling thereof, for the treatment of albumen in urine and for the suppression of excessive kidney secretions, Dr. Durrett said:

"There may be pus secretions, and albumen in the urine from that cause. You may have an acute condition of the kidneys due to an infectious disease, that shows albumen. Albumen may or may not be present with Bright's disease. Presence of a metallic poison in the body may produce albumen. So it is impracticable to label a drug preparation for treatment of conditions of albumen in urine.

"As to apparently excessive kidney secretions, you can not suppress the urine without great damage to the tissues of the body. It is therefore not permissible to claim that a preparation will reduce the kidney secretions. To do so would not be treatment for the prevention, cure, or mitigation of disease. On the contrary, such treatment would be harmful, if it did not actually produce death.

"Certain corrosive poisons cause the kidneys definitely to stop acting, to a greater or lesser extent, and thereby may reduce secretions. Cells of the kidneys are actually killed by such process. Mercury preparations and turpentine may be mentioned as having this effect.

"To sum up the situation as regards apparently excessive kidney activity, it may be stated that if there is an excess of water in the body it will come out. The amount eliminated by the kidneys will depend upon the amount taken into the body, upon the requirements of the body, and upon the proportion that is eliminated by perspiration and otherwise."

This naturally led on to a discussion of diabetes and its treatment. Dr. Durrett repeated the Department's proposition that there is no drug cure or remedy for this disease.

"There is no drug or combination of drugs known to medical science which can cure diabetes," said he. "There are favorite herbs in various countries that are believed, superstititously, to work such cures. None has done so, however. Insulin, given hypodermically, in continued and proper amount, if combined with proper diet, will go a long way towards controlling the symptoms of diabetes. But insulin will not cure the disease. Any claim to the effect that insulin, or any preparation containing insulin, will cure, cannot be permitted. If diabetes is marked by excessive urination, the latter can generally be cleared up if the disease is controlled by insulin and diet."

Dr. Durrett emphasized that preparations involving the administration of insulin through the mouth are no good, in the Department's opinion. It is said that the government has proceeded against a preparation, supposed to contain insulin, to be given by mouth, as violating the food and drugs act.

Seizures Cited

Dr. Durrett pointed to the seizure of a German product called "Insurol," which was claimed to have curative properties. Government experts asserted that it contained no ingredient capable of producing the effects claimed on the label. According to the experts, Insurol pills were made up largely of a material similar to clay, also reducing sugar, a dried gland substance and yeast.

The Department also calls attention to a consignment of pills labeled for kidney diseases, shipped from Worcester, Mass., to Easton, Pa., which the experts declared had no therapeutic value for that class of diseases.

"To label a pill or other medicine as a 'kidney pill' or 'kidney medicine' is nonsense on its face," declared Dr. Durrett. "Such a label may lead the poor, unsuspecting public to buy and take such preparations, for whatever condition that is wrong, or imagined to be wrong, with the kidneys or bladder. This does not constitute proper protection of the public, which the Department conceives to be the principal purpose of the food and drug acts."

Of course, there are trade groups that do not agree that it is necessary to go as far as the Department thinks, for the protection of the public. If a pill has a diuretic effect upon the kidneys, for example, trade representatives do not see why it should not be considered proper to label that product a "kidney pill."

In taking this stand, the trade people do not claim that there are drug cures for all kidney and bladder disease. On the contrary, they are inclined to admit that there may be no such cure for a disease such as Bright's disease, or diabetes. But, at the same time it is declared that ethical practice in the trade forbids claims that a drug will cure a disease regarded as

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Private Brands in Dull Times

IT IS pointed out by some drug manufacturers that the increased price competition among retailers in general is due to the general economic situation. Sales are the rule rather than the exception. The leading stores in many lines are indulging in price-cutting by means of sales that run for months. Many of these stores only used sales in the past for actual clean-outs of discontinued merchandise. This trend, claim these manufacturers, will disappear when business conditions improve. There is nothing that the manufacturer can do to improve the situation from the point of the retailers who are feeling the pinch. All lines are feeling the present situation, they say, so why should the retail drug trade be exempt ?

There are some manufacturers, however, who view the present situation in the retail drug trade as quite serious from the point of view of the manufacturer. These manufacturers are of the opinion that something should be done to improve conditions, although some of them are without ideas as to how to accomplish the purpose and others are not in agreement on the ideas that they do possess.

The danger of the situation, says one manufacturer, is of course from increased competition from private brands now and in the future. The immediate danger of private brands will come from the fact that as more nationally known products are included among the loss leaders, more private brand items will actively be pushed to decrease the losses. The other danger of private brands will result from high mortality among the independent retailers, with the ultimate passing of a higher percentage of the retail drug business of the country into the hands of those merchants who owe their start and their continued existence to price cutting. There is also the fact that many independent retailers who do survive the present period of depression will be able to do so only through their ability successfully to indulge in the same price-cutting tactics as their competitors, with the result that they too will have learned this practice. And, having learned to use price-cutting effectively as a defensive weapon, they are apt to use it offensively against other independent retailers who might desire to have conditions return to normal.

One manufacturer interviewed on the subject was of the opinion that the sharp competition in the retail drug trade would effect no basic change. Said he:

"There are bound to be casualties among retail drug stores during the present period. We can readily see from past events that numbered among these casualties will be both chains and independents. Conditions today are no more favorable to the chains than they are to the independents, although many independents believe that this is not so. Independents have long been of the opinion that they would be unable to meet chain store competition without all sorts of legislation. Now they believe it much more completely than they did before. These independents were of the opinion that private brands could only be handled effectively by chain stores. Now they have their own lines supplied by aggressive wholesalers, as well as combination deals also sponsored by these same wholesalers, but still they believe that the chains can beat them. It isn't so."

Some manufacturers—who might be termed radical, or slightly pink of others—are of the opinion that the manufacturers should meet the present situation by cutting their own prices to the retailers. This, it is believed, would accomplish the two-fold of aiding the independents who are unable to make ends meet due to the large number of items which they must sell

Price competition among retailers is causing many more nationally known items to appear among the loss leaders. Such a policy is believed to be conducive to larger sales of private brands. How shall the manufacturer protect his products from further inroads?

at no profit or at a loss, and lessening the competition of the private brands by narrowing the differential in prices. To quote one of these manufacturers:

"No matter how we view the present situation, it is certainly not favorable to the manufacturer as regards present business or future business. For, while drug manufacturers on the whole have suffered only a slight loss of business and might feel safe and secure from any serious decline in their business activities, the fact remains that if more retailers are forced to rely upon private brands for their profits, manufacturers will feel a steadily increasing loss in their business during the remainder of the depression, and will probably feel a still greater loss in the return to prosperity as these private line items become more firmly intrenched. And, although some manufacturers are wont to talk of the aid given to retailers by the private brands of co-operative and service wholesalers as advantages which should save the independent retailers for the manufacturers, they must remember that this saving of the independents is being accomplished at the expense of the manufacturers who are continually losing business to the private brands of wholesalers in exactly the same manner as they are losing business to the private brands of the chains.

"Naturally it is the desire of every manufacturer to keep profits as close to other years, if, in fact sales can not be kept there. This is being accomplished in a great many instances due to the lower prices prevailing for a great many raw materials. Perhaps the savings thus effected could be passed on the retailer and thus effect the list prices. Such a move might result in increased consumption during the present period, and would certainly be in the form of insurance against present and future inroads of private brands."

Another manufacturer answers this argument in this manner:

Lower Prices Won't Help

"Anyone with any sense knows that the lower prices of raw materials used by drug manufacturers are not of sufficient moment to allow of any appreciable reduction in list prices to the end that independent retailers would not be forced to rely upon private brands for their existence, and that consumption would increase sufficiently in the present time to make up for the loss in revenue. The very large percentage of the manufacturer's cost represented by advertising, sales expense and other items purely of a distributive character, forestalls any possibility of such a move. Drug manufacturers' profits are not of sufficient size to permit of such a step unless the amount of money spent in promotion were seriously curtailed, and then the products of the manufacturers would be relatively unknown and would be in same calss as the private brands as far as the public is concerned.

"The fact of the matter is that there is no sure way out. Price maintenance legislation would undoubtedly, now or at any other time, tend seriously to promote private brands to the greater advantage of the chain store than to the advantage of the independent retailer—but nevertheless to the advantage of both. The manufacturer alone would obtain no direct advantage, only a grave disadvantage. To lower prices would only upset the general market. If one manufacturer reduced his quotations, others would have to do the same thing, and finally the private brands would follow suit. There is nothing in it from anyone's viewpoint, it is merely the same old vicious circle of price-cutting. The more the retailer gets, the more he will give away. And if the manufacturer can lower his prices as the result of lower raw material costs, the private brand manufacturer must have the same advantage and he can also reduce his prices and maintain the same price differentials. Furthermore, the private brand manufacturer has a greater advantage from lower raw material costs than has the known manufacturer for the reason that a far greater percentage of the total cost of the products of the private brand manufacturer is represented by raw materials since he does virtually no advertising. This gives him the real hold on such a weapon. So if the nationally known manufacturers reduce their prices, the private brand manufacturers can reduce their prices by a like amount and actually give away less of their savings than would be the case with known manufacturers."

Price Restriction

Still another manufacturer has a few unkind remarks to make about the actions of some of those who express themselves in favor of price maintenance:

"It is a surprising thing that certain large wholesale groups are working out all sorts of combination deals which are to give the independent retailers whom they sell advantages to help them meet chain store competition. Thus we have all sorts of razor blade and shaving cream combinations. As a matter of fact these deals in themselves constitute nothing other than price-cutting which is fostered by these wholesale groups and the manufacturers whose items are included in the deals. If these wholesale groups and the retailers whom they serve really desire price maintenance, they are not indicating this fact by their actions. But then again, perhaps they would only prefer to have other outlets maintain their prices. The general condition appears to be one of desired restriction for the other fellow. The manufacturer can not afford to take sides. If the chain stores can and will sell the goods of the manufacturers, there is no legitimate reason why they should not be allowed to do so. And if the independent retailers —urged by the wholesalers who serve them—indulge in like tactics, that is excellent competition, but I can not see why the manufacturer should then be

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Bactericidal Efficiency of Essential Oils

By Ruth E. Miller, M. Sc.*

SEVERAL volatile oils, mixtures of two or more of these oils and a sample of beta-naphthol were tested for their bactericidal efficiency. The phenol coefficient test was employed to determine and compare the bactericidal efficiency of these oils.

Difficulty has been experienced in such investigations due to the fact that the oils were very slightly soluble in water. Even in alcohol of 30-40 per cent. only very small quantities were dissolved as shown in a paper by H. C. Wood.[1] It was found, however, that with a mixture of alcohol 28 parts, glycerin 22 parts, prestone 31 parts, soap 6 parts and water 13 parts, considerable amounts of the volatile oils could be dissolved without having a high enough proportion of alcohol to interfere with bactericidal results. The bactericidal efficiency of this solvent was tested and its value will be given later. The prestone was also tested and only when undiluted did it possess any bactericidal action. In some of the later experiments the prestone was omitted and the following solvent used—soap 6.6 parts, and 31 parts each of alcohol, glycerin and water. Nineteen different solutions of oils and active principles were made up and tested. A list of these solutions is given below:

Eugenol	4% by vol., alcohol 32% by vol.
Eucalyptol	4% by vol., alcohol 29% by vol.
Methyl Salicylate	2% by vol., alcohol 28% by vol.
Safrol	1% by vol., alcohol 28% by vol.
Anethol	1% by vol., alcohol 38% by vol.
Menthol	4% by vol., alcohol 38% by vol.
Synthetic menthol	1%
Thymol	2%
Ceylon Cinnamon	2%
Cinnamic Aldehyde	1%
Oil of Cassia	2% (sample A)
Oil of Cassia	2% (sample B)
Sassafras Oil	1%
Lavender Oil	2%
Beta-Naphthol	2%
Eugenol 2%; Eucalyptol 2%	
Eugenol 2%; Menthol 1%	
Eucalyptol 2%; Eugenol 2%; Menthol 0.5%.	

*Research Department, Philadelphia College of Pharmacy and Science. Reprinted from Amer. Jour. Pharmacy.

Mixed Oils Total Oils 0.95%	Anise	3	Oils diluted 1-20
	Cassia	2	
	Eucalyptol	4	
	Eugenol	2.5	
	Menthol	2.5	
	Sassafras	5	
	Alcohol	35	

In all of the above solutions the solvent was added q. s. to make 100 cc.

Phenol coefficients of some of these oils, as calculated by W. M. Martindale,[2] after two minutes exposure of bacteria to oil in saponaceous solution are: Thymol 30, Cinnamon 9, Cinnamic Aldehyde 9, Cassia 6, Wintergreen 4, Lavender 4, and Eucalyptol 4.

Dr. Wood[1] gives the phenol coefficient of oil of Cinnamon as about 12, Cloves about 18, and Eucalyptol about 1.

Preliminary tests were made to determine the greatest dilution which would kill bacteria. Two test organisms were used, B. typhosus (Hopkins strain) and Staphylococcus albus. Five cc. of each dilution were mixed with 0.1 cc. of a twenty-four hour culture of the organism. Transplants into 10 cc. bouillon were made after 2, 4, 6, 8, 10, 20 and 30 minutes contact of dilutions and organisms. The tubes were incubated at 37 degrees C. for forty-eight hours and readings made.

As only three solutions killed the Staphylococcus albus in dilutions weaker than 1-5, no further tests were made with that organism.

The solutions which were efficient when diluted more than 1-5 are as follows:

Thymol	2%	1-25	dilution	killed	in	2	minutes	time
Beta-Napthol	2%	1-5	"	"	"	4	"	"
Eugenol	4%	1-5	"	"	"	4	"	"

In the following solutions of oils the undiluted material killed in two minutes, while the 1-5 dilution showed growth in all the subculture tubes. The solutions are: Eucalyptol 4%, Methyl Salicylate 2%, Safrol 1%, Anethol 1%, Menthol 4%, Synthetic Menthol 1%, Ceylon Cinnamon 2%, Cinnamic Aldehyde 1%, Oil of Cassia 2% (samples A and B), Sassafras Oil 1%, Lavender Oil 1%, Mixed Oils (0.95%),

(Eugenol 2%; Eucalyptol 2%), (Eugenol 2%; Menthol 1%), (Eucalyptol 2%; Eugenol 2%; Menthol 0.5%).

There was a lapse of time between the preliminary test and the final phenol coefficient tests with B. typhosus. In this time (one year) there was a decrease in efficiency of some of these solutions.

The following solutions were less efficient bactericidally—Thymol 2%, Eugenol 4%, Menthol 4%, (Eugenol 2%; Eucalyptol 2%; Menthol 0.5%), (Eugenol 2%; Eucalyptol 2%), Oil of Cassia 2% (sample B), Cinnamic Aldehyde 1%, Mixed Oils (0.95%), Lavender 2%, Sassafras 1%, Synthetic Menthol 1%, Safrol 1%, Eucalyptol 4%, and Beta-Naphthol 2%.

The following five solutions did not show any decrease in bactericidal action: (Eugenol 2%; Menthol 1%), Oil of Cassia (sample A) 2%, Methyl Salicylate 2%, Anethol 1%, and Ceylon Cinnamon 2%.

For the final tests a fresh solution of eugenol was prepared using oil from a different batch of eugenol than was used for the first solution. Quite a difference in bactericidal efficiency between these two eugenol solutions was noted (see tables). The decrease in bactericidal efficiency over a year's time for the same eucalyptol (4%) solution was marked and those results are also given in the tables.

The majority of the solutions of oils remained clear but the following changes in appearance over a year's time were noted: the thymol darkened slightly, the mixture of oils (0.95%) was slightly clouded, the sassafras oil had a heavy flocculent sediment which dissolved on shaking, beta-naphthol became darker in color, and the (Eugenol 2%; Eucalyptol 2%; Menthol 0.5%) mixture showed the separation of oil globules while the liquid changed from a clear pale yellow to a cloudy brown color.

The following table gives the percentage of oil and the dilutions of the oil or oils in each solution which are efficient in two and a half and fifteen minutes.

	2.5 Minutes			15 Minutes		
Solution	*A*	*B*	*C*	*A*	*B*	*C*
Thymol 2%	1/45	1/2250	0.044	1/60	1/3000	0.033
Eugenol 4% (first sol.)	1/30	1/750	0.13	1/45	1/1125	0.088
Eugenol 4% (second sol.)	1/5	1/125	0.8	1/18	1/450	0.22
Beta-Naphthol 2%	1/15	1/750	0.13	1/30	1/1500	0.066
Menthol 4%	1/10	1/250	0.4	1/30	1/750	0.130
Oil of Cassia 2% (A)	1/9	1/450	0.22	1/13	1/650	0.15
Oil of Cassia 2% (B)	1/5	1/250	0.4	1/15	1/750	0.133
Ceylon Cinnamon 2%	*und.**	....	2.0	1/14	1/700	0.14
Cinnamic Aldehyde 1%	1/4	1/400	0.25	1/8	1/800	0.12
Synthetic Menthol 1%	*und.*	....	1.0	1/12	1/1200	0.083
Sassafras Oil 1%	*und.*	....	1.0	1/5	1/500	0.20
Lavender Oil 2%	*und.*	....	2.0	1/10	1/500	0.20
Eucalyptol 4% (first year)	1/2	1/50	2.0	1/10	1/250	0.40
Eucalyptol 4% (second year)	*und.*	....	4.0	1/4	1/100	1.0
Methyl Salicylate 2%	1/2	1/100	1.0	1/5	1/250	0.40
Safrol	*und.*	....	1.0	1/3	1/300	0.33
Anethol 1%	*und.*	....	1.0	1/2	1/200	0.50
Mixtures						
Eugenol 2%.....*a*	1/20	1/1000	0.1	1/35	1/1750	0.05
Menthol 1%	1/20	1/2000	0.05	1/35	1/3500	0.02
Eugenol 2%.....*a*	1/15	1/750	0.13	1/25	1/1250	0.08
Eucalyptol 2%	1/15	1/750	0.13	1/25	1/1250	0.08
Menthol 0.5%.....*a*	1/15	1/3000	0.03	1/25	1/5000	0.08
Eugenol 2%.....*a*	1/15	1/750	0.13	1/20	1/1000	0.10
Eucalyptol 2%	1/15	1/750	0.13	1/20	1/1000	0.10
Mixed Oils 0.95%	1/5	....	0.19	1/10	....	0.095

The abbreviation *und.* means *undiluted.*

*The solvent itself exerted bactericidal action when undiluted, but not if diluted 50%. For this reason phenol coefficients are not calculated for the active principles of those solutions which are bactericidal in 2.5 minutes only when undiluted.

A—dilution of the solution killing in 2.5 and 15 minutes.

B—dilution of the active principle killing in 2.5 and 15 minutes.

C—percentage of oil in each dilution given in column A.

The Hygienic Laboratory Method[3] for determining phenol coefficients was followed, and the figures given below are the phenol coefficients for these solutions and their active principles.

Solution	*A*	*B*
Thymol 2%	0.55	27.6
Eugenol 4% (first solution)	0.38	9.7
Eugenol 4% (second solution)	0.11	2.7
Beta-Naphthol 2%	0.22	11.4
Menthol 4%	0.20	5.1
Oil of Cassia 2% (Sample A)	0.11	5.7
Oil of Cassia 2% (Sample B)	0.09	4.9
Cinnamic Aldehyde 1%	0.06	6.1
Ceylon Cinnamon 2%	0.06	....
Synthetic Menthol 1%	0.06	....
Eucalpytol 4% (first year)	0.05	1.44
Eucalyptol 4% (second year)	0.02	....
Lavender 2%	0.05	....
Methyl Salicylate 2%	0.03	1.76
Sassafras Oil 1%	0.02	....
Safrol 1%	0.019	....
Anethol 1%	0.015	....
Mixtures		
Eugenol 2% Menthol 1%	0.28	
Eucalyptol 2% Eugenol 2% Menthol 0.5%	0.20	
Eucalyptol 2% Eugenol 2%	0.18	
Mixed Oils 0.95%	0.07	

A—phenol coefficient of the solution.

B—phenol coefficient of the oil or active principle.

The above figures indicate that when two or more of these oils or their active principles in a solvent of 31 parts each of alcohol, glycerin and water and 6.6 parts of soap are mixed, their bactericidal efficiency is enhanced. The resulting mixture has a greater bactericidal efficiency than is obtained when each active principle is used separately and in larger amounts.

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Steady Business

That the drug manufacturing business is one not seriously affected by general depression is a general opinion confirmed by Standard Statistics Company in its survey of the industry's securities.

A DISTINGUISHING characteristic of the drug trade during the present depression has been its capacity to maintain sales and earnings at relatively satisfactory levels, says "Standard Statistic Company" in its analysis of drug, medicine, and cosmetic stocks, published July 31. Continuing the analysis says: "Leading manufacturers, in particular, have prevented gross and net income from shrinking materially. During the initial six months of the current year, in fact, few lines of business operated as actively and profitably as the drug industry, in comparison with normal capabilities."

In absence of adequate data covering the industry as a whole, the report continues, it is necessary to rely chiefly upon the individual records of the important companies, in order to comparisons of first half year results with those of the preceding like periods. From our own field investigations, we learn that of the two major units, one organization experienced only a small recession in sales; the other bettered its 1930 sales performance. Three other large manufacturers of proprietaries are understood to have encountered only a moderate decline in gross returns.

Actual net income has shown somewhat greater irregularity, says the report, since advertising and other promotional expenses have varied among the several companies. On the basis of earnings reports which have been issued to date, profits of drug companies were but five per cent smaller in the initial six months of this year than in the same period of 1930.

As a forecast, the report states that there is little likelihood that the favorable first half year showing will be reversed during the final six months of the year. A moderate decline in the 1931 aggregate of earnings in this trade is probable, but the deficiency from the preceding year should not appreciably exceed ten per cent.

Drug sales, the report states, are significantly affected by the degree of sickness, especially in winter months. Obviously this is a factor which can not be forecast. During the most recent winter, there was widespread illness, particularly influenza, and sales of antiseptics and other drug products were measureably stimulated. A general normal state of health during the coming winter would lead to a somewhat smaller level of drug sales during the final quarter of 1931 and the initial quarter of the following year.

The report discusses the "Pine-board" store development throughout the Middle West and along the Pacific Coast and sees it as additional competition for the manufacturer from private brands, although at first glance this development selling standard articles at sharply reduced prices might appear to be a means if increasing the consumption of standard manufactured drug products. The report mentions an instance of one of these stores selling a standard $1.00 proprietary at 49 cents, or 14 cents below the price of the manufacturer.

Aside from various other considerations, the report emphasizes, that "Pine-board" movement illustrates the esesntial problems under which the manufacturer of proprietary drug products is laboring. In short, drug manufacturers face the continuous problem of creating and maintaining consumer demand for certain trade-marked articles. Advertising ingenuity and merchandising skill, therefore, are among the most valuable assets that the proprietary producer can have. We view this "Pine-board" development as but one additional competitive influence, and believe that manufacturers who continue to display marketing and advertising acumen will succeed in holding their positions in the drug industry.

With reference to cosmetics the report states that because of the normal impetus imparted to cosmetic

sales during the summer months, this branch of the trade should be benefiting from some acceleration of demand. Transitional changes within the industry continue, however, and it is difficult to determine the precise relative position of each unit. The rapid progress of Affiliated Products during the early part of the year, continues the report, was due chiefly to the exceptional success scored by the Edna Wallace Hopper division. That this advantage will be maintained throughout the year can not be regarded as a certainty. The difficulties encountered by Coty in reestablishing its position appear to be more than temporary. Variations in brand preferences on the part of consumers occur with disconcerting frequency in the field of cosmetics and toiletries, thus placing the individual producer in a hazardous position.

Investment Advised

The report states the view of the writer that the drug industry is worthy of investors' attention at the present time due to the soundness of its business from a point of stability during all periods in the following words:

"Subject to the scattered exceptions made in our individual analyses, we believe that present holdings of drug stocks, as a general rule, are deserving of retention . . . As the outstanding issue in the miscellaneous drugs division, Drug, Inc., has merit as a conservative investment. Addition of this security to well diversified portfolio is recommended."

The report then gives individual anlayses of the outstanding companies listed on the various exchanges under three groupings, Group A (Strongest Position); Group B (Weakest Position); and Group C (Indeterminate Position). Listed in the strongest position are: Affiliated Products, American Home Products Corporation, Drug, Inc., Lehn & Fink Products Company, Parke, Davis & Company. Sharpe & Dohme, Inc., and Zonite Products Corporation. In the indeterminate position are listed Lambert Company, and McKesson & Robbins.

Interesting in the analyses are the following statements:

Affiliated Products (Angelus, Incarnat, Neet, Immac, Kissproof, Curran Laboratories): Earning progress of this company under prevailing conditions has been highly satisfactory. With the economies of consolidation becoming increasingly evident and company's lines encountering growing popular favor, earnings for first three months advanced to $1.07 from 42 cents a common share reported during first three months of 1930.

American Home Products Corporation (St. Jacob's Oil, Freezone, Hill's Cascara, Jad's Salts, Petrolagar, Kolynos, John Wyeth & Bros.): Thus far in the current year, sales volume is reported to have expanded further, and with normal conditions during the final months of 1931, earnings for the full year may be expected to run moderately ahead of the $5.49 a share reported for 1930.

Drug, Inc.: Should earn around $3.00 a share for the first half of 1931, against $3.01 reported for the first half of 1930.

Lehn & Fink Products Company has prospects of reversing the course of earnings during the next few years, and rising profits would justify higher share prices.

McKesson & Robbins: The downward trend of sales has continued during the current year, necessitating drastic expense reduction in order to maintain profits at last year's level. It is our understanding that this has been accomplished, and 1931 earnings are estimated at approximately $1.00 per share, against actual income of 96 cents per share in 1930. Thus, some basis exists for anticipating the continuance of the present $1.00 annual dividend rate on the slightly over 1,000,000 shares of no par common stock. As a result of new financing last year, funded debt is outstanding to the extent of $21,686,000. Furthermore, the common stock is junior to 428,180 shares of $3.50 preferred stock.

Private Brands in Dull Times

(Continued from page 136)

called upon to demand price maintenance legislation which would further promote the private brands of all retailers and wholesalers."

One manufacturer talks in a rather hard manner with respect to the retailers. Said he:

"While as many retailers as possible are a distinct advantage to manufacturers in the sale of their goods, manufacturers must not worry their heads about keeping inefficient drug retailers in business in times like the present merely through sentiment. For there is no reason other than sentiment which would be found existent if the situation were coldly analyzed. There are retailers of all types who can not get through the present period, but this is no cause for alarm—they should go. It is my belief that manufacturers must continue to act in the same manner as they have in the past. They must continue to promote their goods by the same means; they must advertise in the same proportion to their volume as they did in the past; and they must use every means at their command to hold up or to increase their volume and their profits. It is useless to talk about meeting the generally lower market with lower prices since the people will themselves curtail on such of the manufacturers' items as they can do without, and no price cut would cause them to purchase the items anyhow. Medicine costs on the whole constitute so little of the average person's income that a reduction in the price of these products in accord with the saving in raw material costs would not amount to enough to be noticed. Furthermore, many people are saving a large amount of doctor's fees, and the direct purchase of medicines constitutes a very appreciable saving for them."

Professional Pharmacy

Names and abstracts of the scientific papers presented at the annual meeting of the American Pharmaceutical Association.

Azulene in Achillea Millefolium.
Katherine Graham and Edward Kremers.

That this blue hydrocarbon has been obtained from milfoil is well-known. That it apparently does not exist as such in plant appears now to have been well established. Next problem is to find out in which combination it occurs. Two hypotheses are being made basis of further investigation.

Aconitum napellus L and Varieties. H. W. Youngken.

A preliminary report including observations upon germination of seed, gross features of plants and histologic and microchemic examination of roots.

Bioassay of Adonis Vernalis, N. F. James C. Munch.

The Crude drug should be converted into fluidextract for assay. It is recommended that one-hour frog method of U. S. P. X. be adopted for adonis and minimum systolic dose of 0.6 cc. of fluidextract per kilogram is recommended as standard of activity.

Alkaloids of Argemone Alba Lestib. F. A. Foote.

Dry overground portion of Argemone alba Lestib. contains 2.64 p. c. of alkaloids which is practically all berberine. A minute quantity of an alkaloid was isolated the picrate of which melted at 232-235° C. Berberine was the only alkaloid found in the root.

Assay of Alkaloidal Drugs. Geo. E. Ewe.

Incomplete alkaloidal purification procedures in assay of alkaloidal drugs may cause inaccurate results due to inclusion in alkaloidal residue of titratable calcium, magnesium and ammonium compounds. Sodium carbonate or bicarbonate can not be used to replace ammonia in an effort to eliminate the above-mentioned interfering substances as their efficiency is low in liberating alkaloidal from plant tissues. U. S. P. alkaloidal purification process ("complete" procedure) essentially eliminates these interfering substances but even residues so purified may still retain traces of calcium and magnesium, although the proportion is not significant for ordinary assay purposes.

Alkaloidal Reagents.
James C. Munch, Frank Crossley and Walter H. Hartung.

In this paper, which introduces series of reports on reaction between usual alkaloidal reagents and alkaloids, glusocides and their simpler chemical constituents, the method of preparation of each reagent is given in detail. Modifications in preparation of some reagents have been found to produce an increase in sensitivity. A standard color chart has been developed for reference. Methods of determining the sensitivity are described.

Colors and precipitates obtained by series of homologous compounds are recorded.

Alkaloidal Content of Hyoscyamus Niger L.
Zdenek F. Klan, Prague, Czechoslovakia.

A thorough study of alkaloidal content of different parts of this important drug plant during various stages of its growth and development. Extensive tables are given showing the quantitative alkaloidal content with a qualitative differentiation as to whether it is chiefly atropine, hyoscyamine, scopolamine, tropine or scopoline.

Among valuable conclusions it was found that (1) with growth of germinating plant, quantity of alkaloids in its organs decreases and that (2) in order of their alkaloidal content, parts of plant are as follows: root, (both of annual and biennial plants) flowering tops, fruits, leaves and stems.

Biological and Chemical Assay of Anthelmintics.
James J. Munch and Wm. F. Reindollar.

Results obtained in testing series of Anthelmintics upon Earthworms, Gold Fish, Porcine Ascarides and Mice have failed to agree. Chemical assays have not shown a very close agreement with tests by any bioassay method yet studied. Further work is under way upon Oil of Chenopodium, and upon a number of essential oils.

Local Reactions of Intramuscular Injection of Antimony Compounds. A. E. Jurist and W. G. Christiansen.

Colloidal Antimony, sodium antimony iodide and quinine antimony iodide have been prepared and administered intramuscularly to dogs. All three products cause severe local reactions and are valueless as therapeutic agents.

Bioassay of Apocynum, N. F. James C. Munch.

The crude drug should be converted into fluidextract for assay. It is recommended that one-hour frog method of U.S.P.X. be adopted for bioassay of Apocynum, and minimum systolic dose of 0.3 cc. of fluidextract per kilogram is recommended as standard of activity.

Analysis of Arsenous Iodide. William J. Husa.

Four samples of arsenous iodide, three of which were recently purchased, were analyzed. Only one sample was of acceptable quality, although all were labeled U. S. P. Two samples were low in total. As calculated as AsI_3, and high in total iodide calculated as AsI_3. One sample over two years old was high in arsenic and low in iodide; this may have been due to deterioration. Moisture ranged from 0.09% to 0.38%, and there was from 0.0 to 0.1% of free iodine. Apparently some commercial samples contain 10 to 15% of impurities.

Titration of Boric Acid.
John C. Krantz, Jr. and C. Jelleff Carr.

Titration of boric acid by various methods and employing various indicators has been studied. Proposed method for U. S. P. XI is discussed.

Camphor in Camphor Liniment.

Charles F. Poe, Goldner Lipsey, and David W. O'Day.

It has been found that U. S. P. X. method for determination of camphor in camphor liniment is not satisfactory. Various methods were tried and it was found that more satisfactory results could be obtained by use of vacuum oven, by heating sample in atmosphere of nitrogen, by use of antioxidants, and by means of polariscope. Comparison of above methods together with methods given in U. S. P. IX and X were made.

Camphor in Spirit of Camphor.

Charles F. Poe and Elmer Plein.

Rotations of various amounts of camphor in different percentages of alcohol were plotted. By using these tables, percentage of camphor could be found in a given sample after determination of alcohol and rotation.

U. S. P. Standard for Cardamon Oil.

C. J. Zufall and George DeKay.

Incompatibilities of Newer Chemicals.

Chas. F. Lanwermeyer.

A resume of literature and results obtained from, combinations tried in which following chemicals might possibly be used:—Acriflavine, Acriflavine Hydrochloride, Amidopyrine, Barbital, Barbital Sodium, Benzocaine, Butesin, Butyn, Ephedrine, Ephedrine Hydrochloride, Ephedrine Sulphate, Neonal, Phenobarbital, Procaine Hydrochloride.

Chenopodium Ambrosoides L. var. Anthelminticum A.

R. J. Pauly and Edward Kremers.

Discovery of ascaridol in wormseed oil has given added interest to chemistry of this plant. While for a time the study concentrated on constitution of this unusual peroxide, it seemed desirable to investigate this plant chemically from all angles. Such a study has been undertaken with a number of new results.

Bioassay of Convallaria Majalis, N. F. James C. Munch.

The crude drug should be converted into fluidextract for assay. It is recommended that one-hour frog method for U. S. P. X. be adopted for bioassay of Convallaria and minimum systolic dose of 0.2 cc. per kilogram is recommended as standard of activity.

Oxygen Derivatives of Cymene.

S. Chechik, W. W. F. Enz, and Edward Kremers.

Special chemistry of genus Monarda has necessitated, from time to time, a revision of chemistry of cymene, thymol and carvacrol, hydrothymoquinone, thyquinone, the two monohydroxythymoquinones and dihydroxythymoquinone. This last revision has resulted not only in study of compounds already recorded in literature, but of a number of new compounds. As one result, it is now possible to prepare the two monohydroxy thymoquinones in sufficient quantity and purity to study further these two isomers, presence of which has been revealed in the Monardas, but isolation of which from these plants has not yet been accomplished. Their capacity to absorb oxygen in presence of alkali is next to be studied.

Hydrogen-ion Concentration of Infusion of Digitalis.

John C. Krantz, Jr.

A study of effect of concentration of digitalis leaves on hydrogen-ion concentration of infusion. A study of effect of aging of digitalis upon a freshly prepared infusion, and effect of aging of infusion upon hydrogen-ion concentration.

Hydrogen-ion Concentration and Potency of Tincture of Digitalis.

John C. Krantz, Jr. and James C. Munch.

Shows distinct relationship between hydrogen-ion concentration of tincture of digitalis and its heart tonic value as determined by frog method. Contains account of various tinctures prepared with absolute alcohol and also with eighty percent alcohol.

Tincture and Fluid Extract of Digitalis.

L. W. Rowe and W. L. Scoville.

Action of Digitalis having been established as due to its glucosides, it is logical to conclude that deterioration of liquid preparations is probably caused by hydrolysis of these glucosides. Hydrolysis may be caused by a hydrolytic enzyme in leaves, or it may be result of an inherent instability of glucosides in presence of water. This paper is an attempt to determine reason for instability of official preparations and to find means of stabilizing them.

Fluid Extract of Ergot. L. W. Rowe and W. L. Scoville.

Physiological activity of Ergot having been established as being mainly due to alkaloids insoluble in water and soluble in alcohol, and these alkaloids having been shown to be instable, being easily oxidized, it seems reasonable to judge that more stable preparations of Ergot may result from use of more strongly alcoholic menstrua and use of reducing agents.

Ergot—Size vs. Potency. B. V. Christensen and A. D. Welch.

Several commercial samples of both Spanish and Russian ergot were sorted into two lots, one consisting of ergot less than 3 mm and other of ergot 3 mm or more in diameter. Fluid-extracts were prepared from these several lots and tested for potency according to U. S. P. X method and recently published Smith Colorimetric method. U. S. Standard Fluidextract lot No. 2160 was used as a standard. Results indicate that size of ergot does not determine potency.

Oregon Ergot. Ernest T. Stuhr.

Existence of ergot in Oregon is reported. Soil, conditions of growth, climatological statistics of area, seasonal growth and time of maturity are all given. Preliminary tests carried out by official cock's comb method indicated characteristic activity. Undoubtedly ergot would thrive in this section of country if proper precautions were heeded.

Standardization and Stabilization of Ergot Preparations.

E. E. Swanson, C. E. Powell and A. N. Stevens.

Continuation of study. Methods are studied both biologically and chemically. Hydrogen-ion concentration factor is further investigated. A preliminary report.

Effect of Ordinary and Ultra Violet-Light on Extracts of Essential Oils in (1) Alcohol, (2) Fixed Oils.

Charles F. Poe, E. C. Jones and Ford Millikan.

Alcoholic extracts were made using oils of lemon, lime, peppermint, spearmint, and orange. Rotation of these extracts were determined at time of preparation and at intervals during two years. Part of each sample were exposed to ultra violet and the changes in rotation noted.

Solutions of essential oils in various fixed oils were treated as above. Also the essential oils alone were given same treatment.

Esters of Dialkylamino Methanols as Local Anesthetics.

E. V. Lynn and F. V. Lofgren.

Sixteen esters were prepared and hydrochlorides of eight of them were found to be water soluble. All salts and esters were tested as to action upon a frog muscle-nerve preparation. All soluble salts demonstrated local anesthetic action by this method; some to a greater degree than procaine HCl which was used as standard of comparison.

Salts which demonstrated local anesthesia were then tested by application to a rabbit's cornea. Several salts gave results somewhat analogous to that obtained by muscle-nerve preparation method but salts were also found to cause irritation to cornea, which made their use impractical.

Assay of Ethyl Nitrite Spirit.

W. F. Reindollar and John C. Krantz, Jr.

Comparison is made between silver nitrate method and gasometric method assaying spirit of ethyl nitrite. Also experiments are shown to determine vapor tension of reaction

mixture and its influence on gas volume as measured in gasometric assay. Comparison of gasometric assay with silver assay has been set forth with view of introducing silver nitrate assay for spirit in U. S. P. XI.

Assay of Ferric Chloride Tincture.
Margarethe Oakland and John C. Krantz, Jr.

Shows assay of tincture of ferric chloride to be cumbersome and unfitted for Pharmacopoeia purposes. A more simplified method has been developed and proposed for U. S. P. XI.

Resin of Ipomea. L. E. Warren.

Resin of ipomea is described in U. S. P. X and method for preparation from crude drug is given. Criticisms were received that resin of ipomea of authentic origin did not conform in all respects to standards of U. S. P. X. It was claimed that the maximum moisture limit permitted by Pharmacopoeia (1%) was too low; also limits for acid number (25-30), saponification number (195-215), and ester number (170-185), were too high. Twelve specimens of resin of ipomea were obtained from manufacturers and two laboratory specimens were prepared from authenticated drug. Moisture, ash, acid number, saponification number and ester number, were determined by U. S. P. X. method. Maximum saponification values could not be obtained by following U. S. P. X. method (boiling 30 minutes). They were obtained only by boiling slowly for 2 hours, or rapidly for 1 hour. Acid numbers of several specimens ranged from 9 to 18; saponification values from 173 to 204 (boiling 2 hours), ester numbers from 164 to 193; moisture content 0.7% to 3.4%; ash from 0.3% to 1%. In addition to U. S. P. X. tests, methods were devised for determining "alcohol insoluble" and "water soluble." "Alcohol insoluble" values ranged from 0.05% to 2.8%, and "water soluble" values from 1% to 4%. "Alcohol insoluble" and "water soluble" factors are considered to be of greater value in judging quality of resin of ipomea than are determinations required by U. S. P. X.

Physical Chemical Study of Magnesium Citrate Solution.
Margarethe Oakley and John C. Krantz, Jr.

Shows relationship between acid taste and hydrogen-ion concentration, and has made an effort to point out nature of compound present in solution of magnesium citrate.

Oil of Melia Azedarach Linne.
Lloyd E. Harris and Ralph M. Wilson.

The petroleum ether extract represented 7.38% of air dried fruit. This liquid material consisted almost entirely of a fixed oil. Physical constants were: sp. gr. 0.9218 at 25° C.; iod. val. (Hamus) 73.1; sap. val. 188.3; acid. val. 3.5; unsap. mat. 1.1%. Linolic and oleic acids were identified, and linolenic acid was indicated by bromine addition products. Saturated acids were investigated but none definitely identified.

Bioassay of Mydriatics and Miotics. James C. Munch.

Further studies have confirmed standards developed in previous papers for threshold concentrations of Mydriatics and Miotics in "Cat-eye assay." These to date have failed to develop any significant potentiation of mydriatic action by mixing mydriatics or miotics. Studies of antagonostic action of mydriatics and miotics have shown definite ratios of potency in several instances.

Rape Oil as Olive Oil Adulterant. C. W. Ballard.

Examinations of olive oils by Health Department, New York City, have shown use of rapeseed oil as olive oil adulterant. In certain proportions such mixtures conform closely to present pharmacopoeial standards for olive oil. Most satisfactory means of detecting is by critical temperature of dissolution using Valenta amyl-ethyl alcohol test.

Oregon Grown Japanese Peppermint. Ernest T. Stuhr.

The mint thrives well in sandy soil. Oil and menthol yields are above average of that of native mints. Results deem Japanese peppermint apparently worthy of cultivation on coast.

Japanese Peppermint Oil in Florida.
B. V. Christensen and L. D. Hiner.

Data collected over four years show that Japanese Peppermint Oil produced in Florida contains average of 71% of Menthol and that this menthol content is consistently maintained. Further there is no indication that percentage of combined menthol gradually increases and becomes relatively high. Physical properties and constituents shown tabulated.

Pepsin Assay. Glenn L. Jenkins and H. L. Greenberg.

Critical study of U. S. P. X. method of assay for pepsin compared with methods based on:

(1) Titration of amino acids liberated upon peptic digestion of proteins, and,

(2) Turbidimetric measurements of proteins remaining after peptic digestion. Effects of time of peptic digestion and pH are given.

Phytochemistry of Podophyllum Peltatum.
Arno Viehoever and Elsie M. Klenke.

(1) Various constituents of rhizome were localized and identified as follows:

Sugar with phenyl hydrazine—acetic acid in cells of cortex and pith; starch with iodine and sulphuric acid in cells of epidermis and cortex and pith; quercetin (pigment) with HCL fumes in cells of cortex and pith; tannin with 1% ethereal ferri-chloride solution (new test) in cells of fibre-vascular bundles; resin with NH vapor in cells of fibre-vascular bundles.

(2) Artificial drying at 50° C. was most satisfactory procedure for drying.

(3) In both roots and rhizomes, amount of resin is larger in September than in July, increasing from 3.6 and 3.6% respectively to 4.7%.

(4) Modifications of previous methods, using alcohol-acetone for speedier initial extraction of resin—, and carbon tetra-chloride for more selective final extraction in shake out, resulted in a slightly lower yield, but in an evidently purer resin.

Pitocin and Pitressin Stability. L. W. Rowe.

Dilute solutions of separated active principles of posterior pituitary as represented by commercial Pitocin and Pitressin, were subjected to four conditions of storage for two years and stability tests made at regular intervals. Both were found to be remarkably stable under ordinary conditions of storage. Light did not have a destructive influence on either type of activity contrary to a rather popular belief. Abnormally high temperatures do hasten deterioration of both types of activity materially.

Bactericidal and Bacteriostatic Value of Colloidal Silver Iodide. W. A. Lott and W. G. Christiansen.

Colloidal Silver Iodide has been prepared by several different processes and the conditions most favorable to formation of a good colloid have been determined for each of these processes. A large number of germicidal and antiseptic tests with samples prepared by each process indicate that colloidal silver iodide is neither an active germicide nor antiseptic.

Spearmint Oil in Florida. B. V. Christensen and L. D. Hiner.

Data collected over two years indicate that oil of spearmint produced in Florida is high in Carvone content (av. 72%) and accordingly high in optical rotation. Data indicates that the optical rotation stated in U. S. P. X. should be changed. The annual yield of oil per acre also exceeds that reported by other localities where spearmint is grown.

Studies on Strychnine. J. C. Munch and J. C. Ward.

Effect of various proportions of quinine upon taste threshold of strychnine was determined.

(Continued on page 207)

Treating the Kidneys

(*Continued from page 134*)

incurable by drugs. In that connection, attention may be called to a rule or requirement for admission to membership in the Proprietary Association. That rule reads as follows:

"The preparation must not be advertised or recommended as a cure for disease or conditions which are generally recognized as incurable by the simple administration of drugs."

Of course, there is a difference between that rule and the rule of the Department of Agriculture that mere label mention of a disease regarded as incurable with drugs is not permissible. It has been consistently the contention of the trade that the departmental rule is too radical, too strict, too narrow. And the decision of the federal court in Connecticut in the Lee's Save the Baby case is cited by the trade as indicating that the Department is wrong. This question will be threshed out on the appeal in that case, taken by the Department, to higher courts.

The Food and Drug Administration has seized a number of kidney and bladder preparations. One southern "kidney, bladder and rheumatism medicine," bore labeled claims relative to Bright's disease and diabetes as well as other conditions. The Department found that it consisted essentially of copaiba and cubeb oleoresins, sandalwood oil, potassium chloride, potassium acetate, extracts of plant drugs, sugar, alcohol and water. Misbranding was alleged by the government and the shipment was forfeited and condemned, through default.

Another case involved a western "kidney and liver remedy," which consisted, according to the Department, of potassium acetate, extracts of plant drugs, including a laxative drug and an alkaloid-bearing drug, resins, a trace of phenol, volatile oils, alcohol, sugar and water. This article was charged with being misbranded, by reason of its labeled claims for irritated bladder, gravel, catarrh of the bladder, frequent and painful urination, dropsy, and "certain other ailments of the kidney, liver and urinary tract." The same case involved a preparation called extract, buchu compound, which was labeled for "treating certain ailments of the urinary organs, bladder and kidneys, such as non-retention of urine, inflammation of bladder or uretha, pain or smarting when urinating, catarrh of bladder, gravel or mucous discharges." This preparation contained potassium acetate, extracts of buchu and laxative drugs, resins, sugar, alcohol and water. This case also went by default.

Then there was a "blood, liver and kidney remedy," misbranded, as alleged, for kidney, dropsical and other conditions. This contained, government analysis said, extracts of plant drugs, potassium acetate, small amounts of magnesium sulphate, potassium iodide and salicylic acid, alcohol and water.

A fourth seizure involved a brand of kidney pills alleged to be misbranded for the treatment of a variety of kidney and related conditions and "all urinary disorders." These pills, the government said, contained methylene blue and cubeb oleoresin.

There was a "kidney and bladder remedy" made under the nose of the Department of Agriculture in Washington, seized as misbranded for treatment of a large number of diseases of the kidneys, bladder, prostate, uretha, etc.

So-called "diabetic wines" have been seized on government orders in at least two cases recently reported. Misbranding was charged on two grounds, first, that the product "contained ingredients not native to wines," and secondly, on account of the labeled claims that the products have high tonic and restorative qualities, are recommended by physicians for diabetes, wasting diseases, etc., and as an "aid in the disappearance of sugar in the urine." With some variations, these preparations were alleged by the government to consist essentially of calcium, sodium, potassium, magnesium, and phosphorus compounds, cinchona alkaloids, glycerin, plant drug extracts, alcohol and water.

Lavender

(*Continued from page 129*)

There are, of course, any number of kinds of lavender growing wild, or cultivated in the gardens of France. Aspic, spike-lavender, or *Lavandula latifolia* Will, is frequently confused with the true lavender. It is also widely used by the distilling perfumer. The flowers grow in whorls very close together, forming a short spike, and every part of the culture when sufficiently rubbed throws off a decided odor of camphor. The aspic grows to 0.70 meters in height, and the leaves are wide and spatulate, covered with a grayish tomentum, or kind of pubescence composed of matted wooly hairs, and the arrangement of the flowers is ramified at the base.

The true lavender, or *Lavandula officinalis* Chaix, does not grow quite so high as the aspic, and the leaves are less tomentous. Flowers are in spaced whorls, with the calix of a more or less violet hue, and the corollae are blue, sometimes rose-colored or white. The flowering time is during July and August, with distillation taken care of, as a rule, during the month of July, or, in the case of a late season, the first days August.

Spike-lavender, or aspic, is a more hardy plant from certain points of view, and it can readily stand the heat and drought. True lavender easily accommodates itself to cooler climates, and is, in this respect, more robust than the aspic. The advantages are practically balanced between the two cultures.

A certain hybrid of these two varieties, the aspic and true lavender, has come into existence, known as lavandin in French. This hybrid has sprung into

(*Continued on page 207*)

Cosmetics for the Nails

A wide variety of products are now available for care of the nails. The composition of them is of interest to all cosmetic manufacturers.

A SIMPLE nail wash or nail polish can be prepared in the following manner: 3% of borax, 7% of 28° Be glycerin and 90% of perfumed water, which may be preserved with one of the new paraoxybenzoic acid ester products or any other suitable preservative. A second calls for 4 parts of tartaric or citric acid, 10 parts of eau de cologne (slightly alcoholic), and 86 parts of perfumed water. These preparations are used simply by moistening the nails with them and then rubbing with a piece of leather.

An important preparation, which has more than ordinary cosmetic properties and is more medicinal than cosmetic, is an astringent nail wash used in treating brittle nails. This contains 8 parts of C. P. potash alum, half a part of perfume not decomposed by acid, and 91.5 parts of distilled water. It is also possible to use an astringent powder for brittle nails.

It is often desirable that nail wash or polish should possess bleaching properties as well. The following is a good example. It contains 65 parts of 3% hydrogen peroxide solution, 34 parts of distilled water, 1 part of alcoholic ammonia solution and half a part of pine needle oil, terpeneless.

Stain Remover

To remove cigarettes stains on the nails: 90 parts of 3% hydrogen peroxide, 10 parts of 10% ammonia,of specific gravity 0.960.

The following are effective nail polishing powders: 40 parts of pulverized pumice, 15 parts of talc and 45 parts of tin oxide, and pink coloring matter. A second composition is the same as the first except titanium dioxide is used instead of tin oxide. Such dyestuffs as Alizarin red, Brilliant pink, Paris red, Geranium red, or simply a solution of eosin, may be the color.

Another titanium dioxide preparation, is: 80 parts of titanium dioxide, 17 parts of finest elutriated and ignited kieselguhr, 3 parts of gum sandarac. This may be dyed and perfumed. A more complicated titanium dioxide preparation is: 8 parts of light colored rosin, 3 parts of white beeswax, 24 parts of white ceresin wax, 33 parts of kieselguhr, 28 parts of titanium dioxide, 4 parts of vaseline oil or paraffin oil. Titanium dioxide is perfumed and colored before added. The rosin, wax and ceresin are first melted and then the heated powder is stirred into the molten mass and mixed to obtain a uniform mass while being heated. The mixture is then pulverized after it is cooled down.

Still another titanium dioxide preparation contains 40 parts of tin oleate, 15 parts of pumice and 45 parts by weight of titanium dioxide. The powder is colored and perfumed. Titanium dioxide has proven to be a highly useful product for making nail polishes replacing tin oxide and other metallic oxides hitherto used exclusively for this purpose.

Nail Enamel

The composition of a nail enamel is much more complicated. It consists of 7 parts of bleached carnauba wax or one of the synthetic waxes, 7 parts of Japan wax, 2½ parts of spermaceti, (true or synthetic), 80.5 parts of white vaseline, ¼ part of balsam oil of turpentine, ¼ part of 8% acetic acid, 1 part of 96% alcohol, ¼ part of alkannin and 1 part of perfume. The wax and the vaseline are melted and coloring matter dissolved in molten mass. Then oil of turpentine, alcohol and acetic acid are added and mass stirred until cools. The semi-fluid mass is then perfumed and poured into porcelain or glass containers. The nails are smeared with this enamel and then vigorously rubbed with a leather polishing pad, until the desired polish is attained.

A nail polishing paste is: ½ part of pulverized gum tragacanth, 1½ parts of glycerin 28° Be, 1 part of perfume, 1 part of boric acid and 96 parts of tin oxide. The preparation is perfumed and colored red with the carmine or some other non-poisonous red

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dyestuff. The paste is best contained in small well-closed opal glass boxes or tin tubes.

The following are good examples of liquid nail polishes: 60 parts of gum myrrh solution, containing 6 parts of gum in 94 parts of 90% alcohol, 1 part of tartaric acid, 38 parts of 50% alcohol or 50% isopropyl alcohol, and 1 to 2 parts of strong perfume. Another preparation contains 2½% of beeswax, 6½% of white ceresin, 90% of chloroform and 1% of perfume (heliotropin and ylang-ylang oil). Benzoin resin may be used in place of myrrh gum.

When the nails are desired to acquire a high, lacquer-like gloss, then it becomes necessary to use cellulose lacquers. These lacquers are applied by means of a hair brush and are applied in the form of thin solutions. The lacquer is allowed to dry on the nails and the latter are then rubbed with the aid of a leather or woolen rag. It is found that no matter how the lacquer is manufactured, nor what the quality of raw materials used may be, the lacquer always precipitates certain substances when allowed to stand for a length of time, and these impurities must be removed by filtration. If the product is not allowed to stand for 3 weeks, then a product is obtained which will often leave blank spots on the nails, when it is applied.

A good formula for a nail lacquer is: 5 parts of celluloid cuttings of fine white quality are dissolved in 50 parts of amyl acetate, 40 parts of pure, water-free acetone, 1 part of castor oil, 4 parts of absolute alcohol. This lacquer may be prepared colorless or it may be colored pink with alcohol-soluble Rhodamin. It is unnecessary to perfume this lacquer for the most part, since amyl acetate has a strong fruity odor.

Another composition calls for 8 parts of celluloid, dissolved in 55 parts of amyl acetate, 30 parts of amyl alcohol, and 7 parts of acetone, colored with 10% eosin solution. Still another composition calls for 3 to 4 parts of celluolid of the same pure white quality, dissolved in 36 parts of amyl acetate, 36 parts of amyl alcohol, 18 parts of acetone, 6 parts of absolute alcohol and 1 part of white castor oil.

Any other suitable plasticizer such as di-ethyl phthalate, tri-ethylene-glycol or dibutyl tartrate may be used in the place of castor oil to give elasticity.

One of the latest developments in nail lacquers is a mother-of-pearl luster. This type of lacquer is not perfectly clear, for pearl or oriental essence is contained in them. The essence is not soluble in solvents used, but are very finely distributed therein. Only the pearl essence prepared with amyl acetate can be used in these lacquers.

One formula calls for 97 parts of celluloid lacquer of the first type described above and 3 parts of pearl essence. The proportion of the latter will vary with the intensity of the luster desired. These lacquers may be colored a light pink color.

A high luster lacquer is obtained when a resin is incorporated. A formula containing a resin is: 5 parts of gum benzoin tears, 25 parts of pure methanol, 66 parts of pure amyl acetate add 4 parts of collodion cotton.

Preparations for the removal of nail lacquer or polish are of many different kinds. Four good formulae are given below. The first calls for 60 parts of acetone and 40 parts of ethyl alcohol. The second consists of 50 parts of ethyl acetate and 50 parts of acetone. The third contains 60 parts of methyl acetate, 25 parts of methanol and 15 parts of toluol. The fourth contains 60 parts of ethyl acetate, 10 parts by weight of absolute alcohol, 20 parts of methyl alcohol and 10 parts of amyl acetate.

It has been found that after nail lacquers have been applied to the nail several times and then removed with the aid of the aforementioned compositions, the nails become easily brittle. It is therefore necessary to apply a nail grease or fat to them or to use astringent preparations. A good example of a nail grease is one that consists of 90 parts of white vaseline and ½ to 1 part of fat-soluble, non-poisonous red, for example scarlet red.

Another formula prescribes 15 parts of white beeswax, 10 parts of white ceresin wax, 30 parts of oil of sweet almonds, 35 parts of tartaric acid, 4 parts of citric acid and 6 parts of chemically pure alum.

The removal of the cuticle also calls for: 10 parts of pure borax, which is dissolved in 80 parts of hot distilled water, and is then mixed with 7 parts of salicylic acid and 3 parts of triethanolamine. In another formula 1 to 1½ parts of potassium hydroxide are mixed with 19 parts of 28° Be glycerin and 80 parts of distilled water. When glycerin is used in the place of triethanolamine, as in the above formula, a deeper action is obtained. It is also possible to use a mixed solution of 8 parts of 30% hydrogen peroxide, and 92 parts of 6% solution of borax.

In order to protect the skin from too strong an action of cuticle removers, it is necessary to treat with a cream. An example of such a cream is as follows: 10 parts of white beeswax, 4 parts of a suitable emulsifying agent, 10 parts of oil of sweet almonds or apricot seed oil, 5 parts of white vaseline and 80 parts of distilled water. The wax and vaseline are melted together and then mixed with distilled water of the same temperature as the molten mixture. The mixture is agitated until cool, so as to obtain a pure white and thickly viscous mass. The mass may be preserved with the aid of 1% of an alcoholic solution of propyl hydroxybenzoate.

The skin around the nail is liable to become reddish in color. To avoid this and to make the skin permanently white, a cream can be used which contains a bleaching agent. The addition of titanium dioxide is recommended to improve the action of the preparation.

The use of a styptic pencil is also sometimes necessary in the treatment of the nails and a good compo-

(*Continued on page 200*)

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Labels—Their Design and Application

Many labels applied both by machine and hand are not satisfactory in appearance. Mr. Chilson discusses the paper stock and the design of the label, as well as the other factors which must be corrected before proper labeling can be accomplished.

By Francis Chilson

IT GOES without saying that the label is the most conspicuous, and therefore the most important part of the package ensemble. Upon the appearance and design of the label depends the appeal of the package. Aside from the fact, that the label holds the name and directions for the use of the product, and also a brief advertising message, it serves a very important function in drawing attention to the package. Hence, a poorly designed label or one made shoddy, because ill-adapted to factory handling, will nullify the purpose of the entire design, regardless of the beauty of the cap or container. And a well designed label that has been marred in application looks even worse than one which is merely badly designed.

Faulty Labels

Even the most cursory examination of products on the market—whether labeled by hand or by machinery—reveals, that, while design *per se* has has reached a very high state, general knowledge of paper stocks and labeling methods has not made concurrent advances. How else account for labels frayed along the edges, chipped from the grip of the label magazines, loose and actually falling off, wrinkled, stained, smudged, crooked, and full of humps ?

These conditions are not imputable to machinery makers or production men; invariably they are due to faults in design, stock and size of the labels, and sometimes to the design of the containers. And these faults may be laid at the door of label designers:—usually advertising men and artists, who create new labels without taking into consideration the conditions and equipment to which they are subjected.

Most production men will agree that they have more difficulty with labeling than with any of the other packaging operations because of the extraordinary number of variables involved. Hence, it is with the object of indicating some of the fundamentals of successful labeling that this paper is presented.

Machine Labeling Neat

Let us first of all dispose of the fallacy that machine labeling is not as neat as hand labeling. This is emphatically not true—despite the fact that one of the largest cosmetic houses in the world persists in employing hand methods and refuses to permit machinery makers to prove that machine labeling is better. The reasons why machine labeling of *properly* designed and constructed labels is neater than hand labeling are obvious. Machine labeling is uniform. The label us always applied in exactly the same way with unvarying movements. The label is pressed or wiped on with a single outward movement—they are not rubbed down in all directions with a cloth. The amount of adhesive on each label is precisely controlled. The glue as applied, being continually mixed in the pot, contains always the same amount of moisture. The machine never becomes fatigued, hence all labels, regardless of time of day, are applied with a uniform amount of glue and pressed or wiped on with an unvarying pressure.

The reverse of this is true of hand labeling. An operator smears a board with a quantity of paste, which precludes ever getting the same amount of paste on the board twice in succession. The labels, when spread out and rubbed down, remain on the board, soaking up adhesive, a varying length of time depending upon the speed of the worker, her physical condition, and the effect of fatigue. The degree of pressure she applies in rubbing down the labels when placed on the bottle, varies with fatigue—and with immediate supervision. The amount of time a batch of labels remain on the board varies, with consequent variation of the percentage of moisture in the paste—a condition accentuated in dry weather.

GUARDING

zealously our reputation earned by 60 years of tireless service in the development of

ESSENTIAL OILS
and Allied Perfume Materials

Perfection is not achieved in a day. The reputation we enjoy today has been gained by years of hard work and research.

We have ever maintained that standard of quality, which insures perfect uniformity, greatest efficiency, and the utmost in economy.

•

Essential Oils
Sesquiterpeneless and Terpeneless Oils
Synthetic Flower Oils and Specialties
Aromatic Chemical Preparations
Liquid Absolute Essences, F. B.
Resinoids
Fixoresins
Compounded Aromatic Perfume Bases
Animal Fixatives
Perfumers' Tinctures
Oleoresins

fritzsche brothers inc.

Proprietors of
PARFUMERIES DE SEILLANS
Seillans, France

Sole Agents in U. S. and Canada for
SCHIMMEL & COMPANY
Miltitz (*near Leipzig*) Germany

118 W. Ohio St.
Chicago

78-84 Beekman St.
New York

Fritzsche Bros. of Canada, Ltd.
77-79 Jarvis St., Toronto

The difference of opinion respecting the comparative merits of hand and machine labeling, has persisted because of a failure to recognize that labels designed for hand labeling cannot be applied neatly by machinery, and *vice versa* labels designed for machine application cannot be applied as neatly by hand. Hand labeling requires a super calendered stock of better grade and of at least fifteen pounds more weight than machine label stock. This difference in weight is necessary because of the length of time hand labels remain in contact with a comparatively large quantity of paste, and because of the character of paste required for this work. The stock, therefore, must not soak up too much adhesive; and this is precisely what happens when machine label stock is used for hand labeling. Hand labels require a stock between sixty five and seventy pounds, whereas machine labels require a stock of between fifty and fifty-five pounds.

Since a certain amount of hand labeling is necessary and unavoidable to provide for items of such limited volume that the purchase of labeling machine accessories is not warranted and the time needed for the machine set up not economical, it seems desirable to digress for a moment to indicate some of the practices which insure neat hand labeling while decreasing its cost.

Hand Labeling

Hand labels for ordinary work should be made as aforesaid of a high grade super-calendered stock not in excess of seventy pounds. As with machine labels the grain of the stock should run cross-wise or with the printing. If embossing is employed in the design—and it should be avoided if possible—the stock should not be less than seventy pounds and may be a maximum of seventy-five. The emboxsing should not take the form of a head or a shield in the center of the label because it forms a bunch, which tends to spring up before the adhesive can set, and hence, requires that the label be held down until it clings. Embossing along the extreme edges, particularly in the form of a "picture frame" should be avoided, because that part of the label is held up from the adhesive and requires considerable and continuous pressure in application in order to make it cling. Even at that, it will often cause the label to rise up slightly, and, with subsequent handling, will permit the edges to become torn or frayed. Silver bronze, and in particular dark printing on silver bronze, should be avoided because it smudges when the labels are being rubbed down on the board, and also when being rubbed down on the container afterward. Sometimes, too, silver bronzing smudges or flecks off and clings to the container along the edges of the label where a certain amount of surplus glue is certain to ooze out.

Label boards may be made of marble, plate glass, bakelite or close-grained, planed maple. The size of these boards should bear some relation to the number of labels that can be turned out by the average operator in a given time. When too many labels are spread out on the boards, those which are applied last become somewhat dried and hence do not stick to the container well—and in time may drop off entirely. The number of labels of each size to be laid out on a given size board should be studied and standardized to avoid drying, and, on the other hand, to avoid too many stops for pasting and laying out new labels.

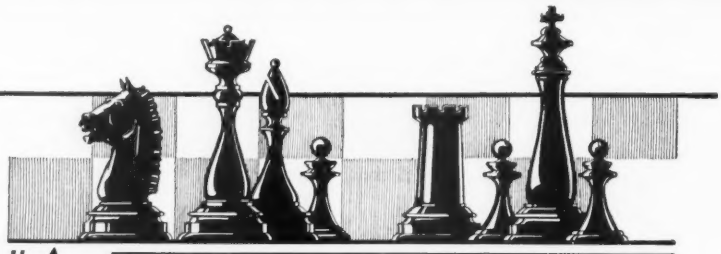
When a team of four girls is employed on hand labeling, greater speed and better labeling can be achieved by having one extra girl to paste the boards, lay-out and rub down labels. This keeps the labelers—labeling. Much of the time required for hand labeling is wasted in pasting up the boards and in laying out labels. When a conveyor with side-tables is employed, the side-tables can be covered with thick linoleum and used for laying out instead of boards. When this method is employed, forty-eight inches of space should be allowed each operator—twenty-four inches of which, is used alternately by the extra operator for laying out labels, as the labeler—whose chair should be fitted with casters—shifts back and forth as the labels laid out in either section become exhausted.

When the labeling operation is concurrent with filling and capping as it so often is, the speed of the operators should be studied, so that the labeling team will consist of enough operators to take the output of the capper without the loss of time incident in stopping to stack containers, when they come down the belt too fast for the operators to label them.

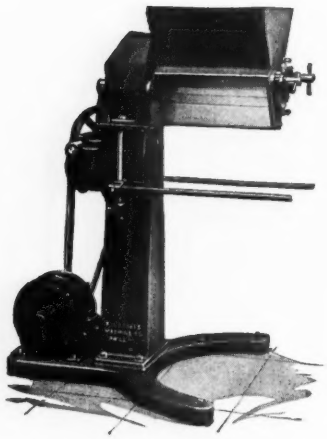
Heavy Labels

When embossed, heavy foil and metal labels are used they must be held on until the adhesive sets. This curtails production considerably. But it is not necessary to hold the labels down if the quantity turned out warrants the construction of a tension belt to do the holding down. This belt should be very tight, situated directly above the conveyor belt and regulated to move at the exact speed of the conveyor. A series of spring idlers within the upper belt keeps its pressure uniform. A raising device permits the adjustment of this upper belt to the thickness of the container. The operator, after applying the label, inserts the labeled container between the moving belts, in such a way that the upper belt holds the label firmly in place as the container moves toward the discharge end. If the container is oval or round a series of rubber holders can be attached to the upper belt so that its pressure is distributed evenly over the entire surface of the label. The efficacy of this device depends entirely upon the absolute synchronization of the upper belt with the lower one.

Although there have been instances where heavy labels have been successfully applied by machine on absolutely flat surfaces, and there are rumors floating about that a labeling machine for applying metal



"A STRONG ATTACK IS THE BEST DEFENSE"

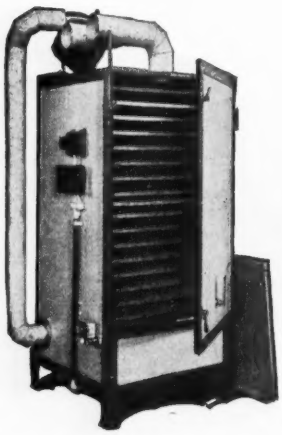


New Oscillating Granulator. Large capacity, rugged, powerful, quiet. Handles 98% of all granulations. Can be mounted on roller base.

In chess and other games, in war, and in business—***particularly now***—the strong attack is essential to real success. A strong attack on your production problems begins with the installation of the right equipment for the purpose.

The equipment illustrated—for modernizing your granulating and coating departments—is typical of the contributions made by STOKES during 36 years' service to the pharmaceutical field.

Coating and Polishing Pan. Large base. Angle easily adjusted. Direct motor driven.



Electrically-heated Drying Closet—Thermostatic Control. Compact, strong, rigid, fireproof. 16 trays. Steam heated, if desired. Ideal for granulating and for effervescing salts.

FJS

Use STOKES Pharmaceutical Equipment

Powder Fillers	Tube and Jar Fillers	Tablet Making Machines
Drying Closets	Jacketed Kettles	Vacuum Pans and Dryers
Percolators	Bottle Washers	Oscillating Granulators
Capsule Fillers	Conveyors	Coating and Polishing Pans
Water Stills	Special Machinery	Drug Mills and Mixers
Molds of all Types	High Vacuum Pumps	Alcohol Recovery Apparatus

WRITE FOR CATALOG

FJS STOKES MACHINE COMPANY

Pharmaceutical Equipment since 1895

5932 Tabor Road **Olney P. O.** **Philadelphia, Pa.**

labels is about to make its advent, successful machine labeling depends upon the use of light paper stock and a thin film of glue. As in the case of hand labels, machine labels should be made of a super calendered-stock of between fifty and fifty-five pounds. Likewise the grain should run across the label to resist the stress that is placed upon it by the wipers of the labeling machine. If the grain is placed the wrong way the label will curl up or tear. Flint papers, while attractive in appearance should not be employed for machine labels because of a pronounced tendency to curl. Coated papers are taboo for the reason that they are too stiff and will flip back before the glue has had time to set. Pure foil papers may be handled by machinery, but those backed with newsprint, are apt to pucker upon drying because the newsprint soaks up the moisture in the glue before it has a chance to set. Also, foil stocks mar very easily and it is very difficult to get any that do not show fine creases on the surface, even before being made up into labels. Silver bronzed papers smudge very easily and do not carry printing without some danger of smearing. Progress is being made in the development of more serviceable silver bronzed papers, but to date they do not compare with gold bronze papers in particular, those which have been burnished previous to calendering. Gold moreover, takes dark printing inks much better than silver bronze. When pastel colors are employed in label design, it should be remembered that such colors fade very easily, and care should be taken in specifying non-fading inks when the label order is placed. These non-fading inks are a comparatively recent development, and while not absolutely fade-proof, are better than standard inks.

Avoid Embossing

Embossing should never be employed in the design of a machine label if it can be avoided. It has a tendency to lock the labels in the magazines so that the picker plates will fail to disengage them, and thus cause mis-labeling and cessation of the production flow. Embossing also prevents the glue from being distributed evenly, causing the label to be applied without sufficient glue with the subsequent danger that it will fall off. Embossing sometimes traps air beneath the label, which gives it a pulpy appearance, and, when touched, has a bellows effect that may disengage it or cause cracking. When embossing is employed it should be shallow and distributed over the surface of the label to avoid humps in the label packs.

All labels, whether for hand or machine application, should be die cut. When labels are not die cut, the packs are likely to be slightly tapered, so that, while one label sticks in the magazine because over-size, the next one is apt to drop into the glue pot because slightly undersize. A difference of a sixty fourth of an inch means the difference between uninterrupted operation and continual stoppages to make machine adjustments or to straighten the labels. Small labels should be die cut so that the slight arch in the packs will be upward instead of downward. This will throw the edges of the labels down toward the picker plates, enabling them to establish firm contact. It is vitally important that the extreme edges of the label be well glued so that frayed and torn edges may be avoided.

Labels should come from the printer in neat bundles wrapped in paper or in cartons, holding the exact amount that the label magazine will hold and no more. The packs should never be tied with string because it cuts into the edges of the labels and often causes the upper and lower ones to bind.

The holders of the label magazine should be rounded off and set so that they just merely hold the pack and no more. If the feet of these holders are sharp and the magazine set too tight, the edges of the label will be torn or gouged out when the picker plates pull the lower one away. This is the cause of the four notches so often seen on the edges of machine labels.

Machine glues should be light and only a thin film applied to the label. The thinner the glue the more permanent will be the labeling job. When the glue film is too thick it is apt to soak through the stock sufficiently to cause discoloration. Often, too, it will cause lumps and wrinkles.

Consider the Container

A final word as to the container. Examination of packages with wrinkled labels frequently reveals that an attempt has been made to place the label on a surface that is either convex or concave. Oftimes the label is not the right shape for the container as for instance when large square, round and oval labels are applied to tapered bottles. A frequent cause of frayed edges lies in that fact that the attempt is made to cover the entire face of a container, instead of leaving a margin of at least an eighth of an inch surrounding the label so that the wipers can function effectively down to its very edges.

When embossing is employed in the design of glass containers, that embossing should be carefully placed so that it will not emphasize the lines of labels that are slightly off-center. Glass varies to an extent that makes it impossible to register every label exactly in the center, and hence, when embossing is improperly employed, it tends to make the label appear crooked, even though the variation from dead center registry may only be as little as one sixty-fourth of an inch. This is true, too, of hand labeling. These slight variations cannot be noticed when there is no embossing on the container.

To make it possible for those interested to avoid difficulty in designing labels, the following summary is appended:

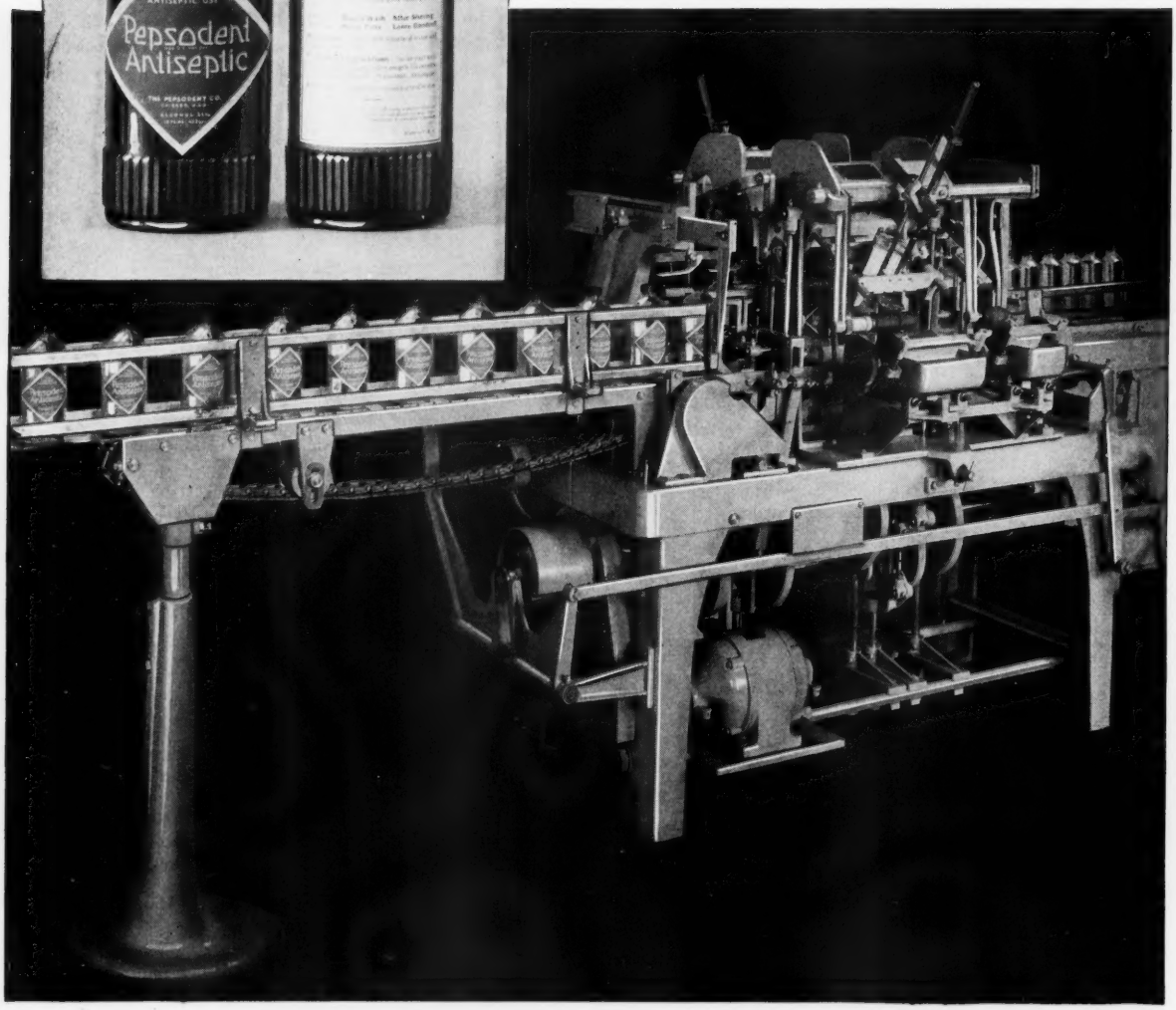
Labels should be made of super-calendered stock from fifty to fifty-five pounds, with the grain running across the label. Labels should be die cut. Embossing

(Continued on page 200)

•Pepsodent Antiseptic Mouth Wash —

the signally successful new product of the Pepsodent Company, Chicago, goes to the consumer in an attractive package.

World Automatic Straightaway Labeler affixes these front and back labels at one operation neatly and precisely on this recessed bottle.



ECONOMIC MACHINERY COMPANY

Largest Manufacturers of Labeling Machines in the World

WORCESTER, MASS., U. S. A.

WORLD LABELERS

For Plant Managers

By Francis Chilson

Something New in Package Design

The current issue of a leading advertising periodical illustrates and describes two new containers designed presumably by a well known package artist. The first was a bottle resembling either a recumbent camel with his neck pulled in, a motor cycle cylinder or a dynamo—take your pick, any one will approximate it. A series of rings projecting from the bottom of the bottle, we are told, serve the purpose "of keeping drops of mineral oil from falling on the shelves of the medicine cabinet." And that's the God's strewth! Name of periodical on request. The fact that the bottle could not even be blown, and that, lacking a neck, it would be all but impossible to pour from it without dripping, made no difference to this "creative artist." Little, practical considerations like these never do make any difference to package artists. But we, hard-boiled, production men are continually warned that production limitations should not be allowed to cramp "artistic temperament" and "free expression."

The other container was suggested as a new form of milk bottle. It resembled somewhat a toilet bowl in shape. It is amazing that the artistic genius who designed it did not see that it was better suited for a castor oil bottle.

Notice to Plant Managers

This corner of Drug Markets was originally planned to provide a means for the exchange of ideas, news, comment and suggestion among plant managers. But to date many of the men we would like to hear from have hesitated about coming forward. This department can be kept sprightly and informative only when you fellows take an active interest and kick in. Every suggestion made in this corner is made from one man's experience and observation, and this by no means exhausts each topic, since there are many unusual angles to every subject and differences of opinion on every theory. We want those other angles and differences of opinion. In giving them you help yourselves by making this department more meaty.

Another Response on Drug Extraction

Mr. Max Techow, executive head of G. C. F. Techow, Hamburg, Germany, has written us the following interesting letter:

"I am reading with considerable interest your articles in the paper in the care of which I am sending this letter.

"In one of your remarks under the heading Plant Management you suggest the adoption of a heavy mixer for the extraction of crude drugs. It will doubtless interest you to learn that such mixers are used in the extraction of Cinchona Bark by the Quinine process since a good length of time in Europe already. It has been found that only very small batches of the heavy cinchona-slaked-lime paste can be extracted without a mixer. For a plant of a daily capacity of 10 KG of quinine sulphate and above a strong extractor provided with a strong mixing system is indispensable."

The writer wishes to thank Mr. Techow for his interesting and informative letter and for his interest in The Plant Manager's Department. It is very gratifying to learn that what had been only a theory with us, has already been employed in practice. This is the second application of the mixer-vacuum principle we have heard of and there must be more. Let's have more contributions on the subject.

Notes on Drug Solvents

Alcohol, ether or acetone is usually employed for hard drugs that require fine pulverizing such as nox vomica, aconite, veratrum viride, etc. And weaker solutions, that is, a mixture of water and the proper solvent, are used for percolating the soft, and hence, coarsely ground drugs, such as squill, gentian, rhubarb, etc.

When the crude requires preliminary moistening, the amount of solvent usually necessary is about one third of the quantity of the drug.

Making Ointments

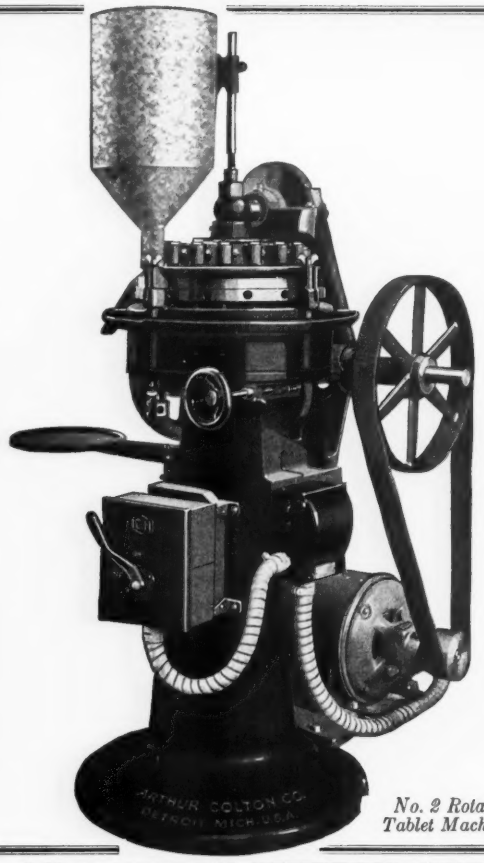
The hard fats—spermaceti, or paraffin, should be melted first, and then the lanolin or benzoated lard should be added and the whole mass thoroughly mixed before being allowed to cool. This procedure keeps the soft animal or vegetable fats from being heated too much, and since the various waxes are of greater hardness than the fats, the mixing insures a smooth mass free from grittiness caused by the crystallization of the waxes.

The medicinal ingredients or pulverized minerals, as the case may be, should be prepared separately. If these require dissolving in water, the solution should be warmed before being added to the base in order to prevent graining. If they do not require solution, then a quantity of the base and the medicaments should be mixed and run four times over finishing rollers or through an ointment mill, to make a smooth impalpable mass, and this should then be added to the base while it is being mixed. Crystals of zinc sulpho-carbolate, phenol and also zinc oxide can be handled in this manner without danger of grittiness in the finished product.

Maintenance Notes

Conveyor belts should be as carefully maintained as other equipment—canvas belts particularly. Canvas belts soak up spillage and in time accumulate a film of greasy dirt which soils the bottoms of containers passing over them. In time such belts stretch and cause hitches in the flow of production, particularly when two of them are employed in the same line. For this reason goods travel slower on the slack belt than on the tight belt. Canvas belts should be scrubbed every week with a stiff brush and a good solvent; and they should be tightened every time they show signs of loosening up. Canvas belts are particularly bad on cooling tables, on which the various belts must be of the same tension in order to keep the load moving evenly over the entire surface of the table.

Rubberized canvas is much less likely to stretch and should be specified on all



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

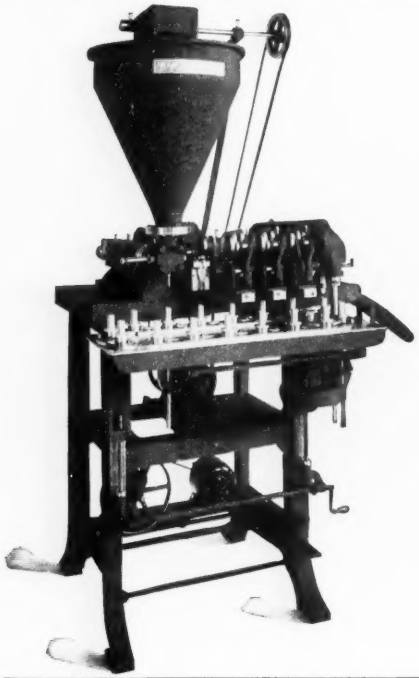
Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan

Save and Be Safe With the *Kiefer Clipless Closure*



Clips are no longer necessary. That fact is recognized and admitted since the introduction of the Kiefer Clipless Closure.

No clip troubles!

No clip expense!

The Kiefer Clipless Closure (patented) seals your tubes with a *tight* handsome closure. Compare it with any other closure. The Kiefer closure will hold. It can be used with confidence.

Longer Tubes are Not Needed for the Kiefer Clipless Closure

Remember this when you decide to save thousands of dollars by eliminating clips. Don't offset that saving by using a closure that requires longer tubes.

The Kiefer Tube Filler and Closer uses our "Impacta" method of filling (patented). Fills your tubes solidly, free from air bubbles, cleanly. No wiping of tubes.

Write for sample tube and full information

The Karl Kiefer Machine Company

Cincinnati, Ohio

new conveyors. This type of belt should also be carefully cleaned particularly when used in a line packaging oils.

A Space Saving Set-Up Box

Manufacturers who contemplate merchandising Christmas sets or Combination packages will be interested in the Simplex Box manufactured by the Dennison Co. This box combines the features of the set up-box with a collapsible device which makes it possible to store it in a fifth of the space required for the latter. When set up it looks exactly like the regular set up box.

Notes on Making Machine Layouts

New layouts are often arrived at by a process of juggling machines and tearing down newly erected partitions because of the fact that the whole thing is not visualized on paper before-hand.

Begin a single floor layout by using an accurate blue-print, which shows all openings—doors, windows, elevators, stairs, etc. Superimpose on this, according to scale: high pressure steam lines, return lines, power outlets, light outlets, gas pipes, water pipes and sinks, sewage pipes and toilets. Then make scale templates showing the top elevation of every machine and every piece of equipment needed, including fixed tables and office desks. These templates show all immovable projections on the machines such as valve handles, levers etc; each should bear the name of the machine it represents, and small arrows should show front and back, inlet points and discharges. Lay out the control and research lab. adjacent to gas, water, and sewage outlets—providing if possible outside light. Then lay out the amount of space needed by the office, taking care that it does not interfere with the effective layout of the equipment. Then lay out the equipment so that the flow of work shall be from manufacturing rooms and finishing material warehouse toward the finished stock and shipping room, placed adjacent to the freight elevators. This flow may be in a straight line or in the form of a U. In some layouts the space fronting the elevators is divided into two parts; one for finishing material and raw material warehouse, the other for finished stock room. After carefully studying the layout by putting hypothetical batches of goods through the various processes and packaging operations, then lay out the partitions that may be needed—after making certain that the necessary adjustments have been made in the equipment layout. The amount of space, previously allocated to the office, should be held as a reserve for space adjustments. While it is desirable that the office have outside light, it is not economy to use valuable production space, or to employ an uneconomical makeshift in the machinery layout in order to give it. After all, the development of modern lighting and ventilating devices makes it possible to place the office in a dark corner or against a dead wall without impairing its efficiency.

New Catalogs

We have just received an attractive catalog from The Karl Kiefer Machine Co., Cincinnati, O. illustrating and describing the Cincinnati automatic tube filler and clipless closer. The catalog emphasizes the adaptibility of the machine for a variety of tube sizes, and the speed and ease with which the change over can be made. An interesting feature is a chart showing the cost of operating the Cincinnati clipless automatic tube filler in comparison with other methods. Another feature of the catalog which will interest plant managers is that it is illustrated with photos of well known products now being filled with the Cincinnati system.

Package Contest

It is high time we production men gave free rein to our own "artistic temperaments". Accordingly, this department announces a package design contest for production men only. First prize: five hundred dollars, confederate money, for the most original design. "Original" means some striking departure as for instance: A bottle that can neither be filled nor emptied; A bottle with a pop-valve to relieve the surplus gas that sometimes pushes corks out. A bottle that won't stand up. A bottle that won't lay down. A bottle with a eye-guard, blown into the glass, to keep the user from pouring the contents into his eye. And so on. Contest closes next Christmas. Note: The designs must be "modernistic" *in the extreme.*

Vitamin Primer

National Better Business Bureau, Inc., New York, has issued the following primer on the subject of vitamins, in order that advertisers may know better what they are talking about so that consumers will be correctly informed:

Vitamin A: Fat soluble and anti-infective vitamin. Gradually destroyed by heat but rapidly destroyed by oxidation.

Vitamin B or B1: Water soluble and anti-neuritic vitamin. Appetite-promoting. Some authortiies declare that a lack of it is manifested through fatigue and nervousness. Practiaclly destroyed when heated at high temperatures.

Vitamin C: Anti-scorbutic vitamin, water soluble, rapidly destroyed by oxidation. Declared to be important for tooth preservation.

Vitamin D: So-called fat soluble "sunshine" vitamin. Controls development of bones, deficiency may result in rickets, soft bones, and poor teeth.

Vitamin E: Fat soluble, very resistent to destructive action. The anti-sterility vitamin.

Vitamin F: Not recognized at the present time.

Vitamin G or B2: Not injured by ordinary cooking and its absence from the diet is manifested by pellagra, a nerve and skin disease.

Abbott Laboratories, North Chicago, Ill., declares the regular quarterly dividend of 62½ cents a share, payable July 1st to stockholders of record June 18.

The financial condition of the company is reported to be excellent. The present ratio of current assets to current liabilities is better than nine to one.

The combined net earnings for the first five months of 1931 were reported as approximately 10 per cent. better than the same period last year, notwithstanding a decrease in sales of about 4 per cent.

McKesson & Robbins, Inc., Bridgeport, Conn., has appointed W. I. Tracy, Inc., New York, to handle its advertising account.

MISCELLANEOUS PATENTS

Perfume from Orris Root

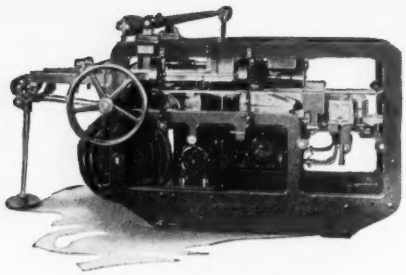
The myristinic acid and the other fatty acids obtained from orris root by the usual extraction method are treated with methanol and sulphuric acid and thus converted into esters having low melting points. The esters are then poured into water and washed. The oil obtained is dried. It is useful in compounding perfumes. Societe Anonyme des Etablissements Roure-Bertrand Fils and Justin Dupont, Seineet-Oise, France. French Patent No. 673,341, filed July 30, 1928.

Aseptic Combs

This patent is particularly interesting to the pharmaceutical industry in that it affords a new use of iodine. The process simply consists in adding iodine to the plastic mass that is used in the manufacture of the combs. Albert Poulin and Marcel Launey, France. French Patent No. 652,100, filed August 30, 1927.

Sterilization of Organic Substances

A solution containing 0.1 to 0.2 per cent. of benzoic acid and to which have been added a few drops of 10% alcoholic solution of quinatoxine, particularly an alkylated hydrocupreine having 5 to 9 carbon atoms in the aklyl group (for example eucupine and vucine), is suitable for permanently sterilizing organic substances, dressings, etc. without heat. E. Schulze. B. P. No. 399,602, filed July 22, 1929.



Makes large savings in Packing Costs . . .

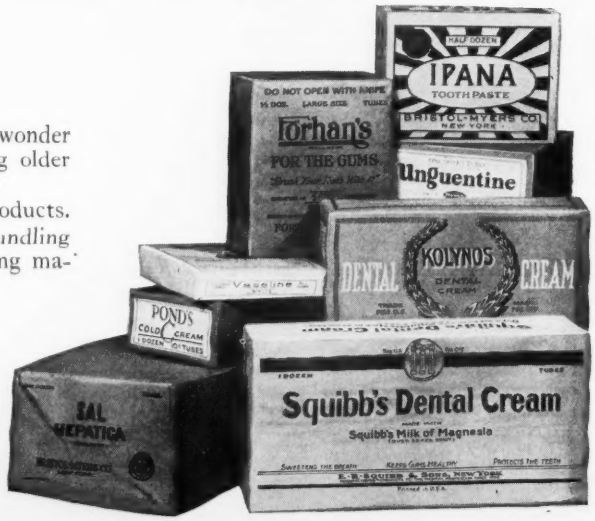
40% to 60% saved on packing costs! Is it any wonder that more and more manufacturers are replacing older packing methods with modern machine bundling?

Machine bundling is ideal for pharmaceutical products. You can bundle in dozen or half-dozen lots. The bundling machine keeps step with the output of 2 cartoning machines—does the work of 10 hand packers.

Bundles are made of tough kraft paper tightly sealed, and stand up well in shipment.

Send us a dozen of your packages, and let us show you how our machine would bundle them.

PACKAGE MACHINERY COMPANY
Springfield, Massachusetts
New York Chicago Los Angeles
London: Baker Perkins, Ltd.



PACKAGE MACHINERY COMPANY

Over 150 Million Packages per day are wrapped on our Machines

"FILMASEAL"

Trade Mark Reg. Patents Pending

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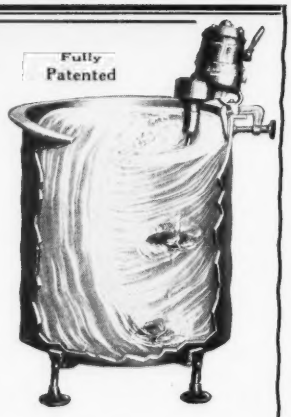

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THE terrific pressure of competition becomes dangerous when you permit any variation to occur in the uniform quality of your product. That is why LIGHTNIN mixers become daily more important to you and to your field. The "double action" illustrated here is the reason for LIGHTNIN thoroughness; LIGHTNIN speed; LIGHTNIN economy in time and labor saving. And there is a LIGHTNIN with just the size . . . power . . . and capacity you require.

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NEW YORK CITY

Pats on the Back

WE are justifiably proud of the enthusiastic response with which the leaders of the drug trade have greeted the appearance of Drug Markets Catalog and Directory. Some of those who have been kind enough to write in expressing their opinion of this 1931 edition are:

A. A. Teeter,
Chas. Pfizer & Co., Inc.

Congratulations! The completeness of this edition most decidedly sets a standard for references of a similar character. One needs only to glance through the book to realize fully the extraordinary amount of time and labor necessary to compile such a voluminous amount of up-to-the-minute, accurate and unusual data. It is, without a doubt, the most complete and useful reference of its kind.

F. O. Taylor, Chief Chemist,
Parke, Davis & Co.

I have gone through it rather briefly and find in it a large amount of very useful information and doubtless as time goes on will find it more and more of benefit and use.

A. A. Wasserscheid,
Mallinckrodt Chemical Works

I believe it to be the most comprehensive work of its kind that I have seen. It is a real source of information for many branches of our industry, and, if its contents are properly used, should prove of considerable benefit. You have given the trade a valuable book.

R. Lincoln McNeil,
Robert McNeil

An examination of the book reveals a tremendous amount of information and I am confident that the compliation will be of considerable value to me in many ways as a reference book.

F. J. Hailer, Purchasing Department,
Louis K. Liggett Co.

In glancing through this publication I was rather amazed to see the great amount of technical and commercial information in such complete and concrete form. This publication will find a very useful place in our organization and we take this opportunity to compliment your staff on their excellent work.

C. C. Concannon, Chief, Chemical Division,
Department of Commerce

This looks like a splendid piece of work.

R. L. Evans, Secretary-Treasurer
Marinello Co.

May I compliment you upon the get-up and general usability of the Drug Markets Catalog and Directory. I believe that this will be extremely useful to manufacturers in the cosmetic field, and I am very grateful to you for the work of compiling so helpful a book.

Carl Saalbach, Treasurer,
Pittsburgh College of Pharmacy

I congratulate you upon the very comprehensive matter of information it contains.

Dr. F. Koenigsberger,
Parfumerie St. Denis

The copy of Drug Markets Catalog and Directory is very much appreciated.

{ Industry's Books }

Survey of Retailing Practices, in two volumes, 478 pages, The Dartnell Corporation, Chicago, Ill., $6.35 net.

Prepared with the cooperation of more than three thousand wholesalers, manufacturers and retailers, this investigation of retailing practices both from the point of view of independent and of chain, is of paramount interest to sales and advertising executives.

Pharmacology and Therapeutics, by J. A. Gunn, 233 pages, Oxford University Press, New York .

A very useful, general survey of the field of drugs and their uses, prepared primarily for the beginning student, but of interest to everyone in the drug elfid.

Principles of Organic Chemistry, by James F. Norris, 595 pages, McGraw-Hill Book Co., Inc., New York.

The third edition of this work incorporates the recent advances in the field into this textbook designed principally to meet the needs of students beginning the study of this subject.

"Salesmen in Marketing Strategy," by Leverett S. Lyon, 422 pages, The MacMillan Co., New York City, $5.00 net.

An analysis of the task of constructing and using a sales force and the relation of the use of this tool to a wider marketing strategy. Suggested for the use of salesmanagers and salesmen, students and economists.

"Budgetary Control in Manufacturing Industry," 180 pages, National Industrial Conference Board, Inc., New York, N. Y., $3.00 net.

The results of the National Industrial Conference Board's study of budgetary control in manufacturing industry. Includes application, preparation, estimates, administration, sales budget, production budget, expense budgets, capital outlay and cash budgets, and summaries.

Radio in Advertising, by Orrin E. Dunlap, Jr., Harper & Brothers, New York, 383 pages, $5.00.

This book deals with the present status of radio and its possibilities as an advertising medium. It discusses in detail programs, continuities, rates, legal problems, television. An aid to those who are contemplating radio advertising.

French Salicylate Trade

France is both an importer and an exporter of salicylic acid and salicylates. Exports of salicylic acid in 1930, however, exceeded imports by 64 per cent. in quantity, while exports of salicylates were ten times the imports of salicylates. Although both exports and imports of salicylic acid declined in 1930, there was a sharp rise in the average unit value during that year as compared with 1929. The following table shows exports and imports of salicylic acid and salicylates during 1929 and 1930:

	1929		*1930*	
	Metric quintals	*1,000 francs*	*Metric quintals*	*1,000 francs*
Salicylic Acid	286	285	82	140
Salicylates:				
Methyl	433	515	423	580
Phenyl	200	612	95	338
N. E. S.	341	431	266	506
IMPORTS				
Salicylic Acid	66	60	50	75
Salicylates:				
Methyl	12	12	37	45
Phenyl	2	4	6	26
N. E. S.	175	274	38	90

Value of Franc in U. S. currency: 1928 = $0.0392;
1929 = 0.0392;
1930 = 0.03925.

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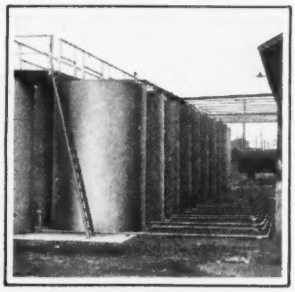
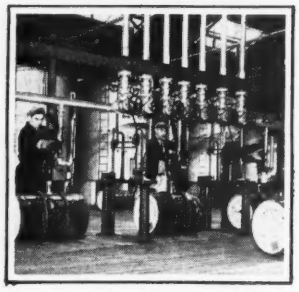
In these large distilling columns many chemical solvents are produced.

An assembly of 20 large storage tanks for important solvent chemicals.



Accurate measure is guaranteed by these automatic - electric filling machines.



ABSOLUTE ETHER

(*Ether, Ethyl, Absolute*)

$(C_2H_5)_2O$

SPECIFICATIONS

Color and Properties:
Volatile liquid, water white; characteristic odor, with sweetish burning taste.

Constants:
Specific Gravity—Not more than 0.710 at 25/25°C.
Weight—5.90 pounds per gallon.
Acidity—Not over 0.003% as acetic acid.
Boiling Range—About 35°C.

Solubility:
Miscible with alcohol, benzol, chloroform, petroleum ether and fixed or volatile oils. Soluble to extent of about 8% in water at 25°C.

Derivation:
Dehydration of ethyl ether over metallic sodium.

Method of Purification:
By careful distillation.

Grades:
Absolute (free from water and alcohol).

Containers:
50-, 10- and 5-gallon drums.

Fire Hazard:
Inflammable. Precautions must be taken to keep the vapors away from fire or flames.

Railroad Shipping Regulations:
Requires Red Label.

ABSOLUTE ether is a valuable laboratory agent. Whenever a dry ether, free from alcohol and water, is required for extractions, analytical work and organic synthesis, the grade of absolute ether manufactured by the U. S. Industrial Chemical Co., Inc. will be found most suitable.

It is made from U. S. P. ether, which is treated with metallic sodium to remove water—then carefully distilled. This grade of ether is particularly well adapted for use in Grignard reactions due to its passing through a special process of purification.

Trial samples will be furnished on request, while working quantities are supplied at nominal cost. The U. S. Industrial Chemical Co., Inc., 60 East 42nd Street, New York, N. Y.

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WORLD'S OLDEST AND LARGEST MANUFACTURER OF ALCOHOL CHEMICALS

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Amyl Acetate. Butyl Acetate. Ethyl Acetate. Ethyl Chloro Carbonate. Ether

• DIVISION OF U. S. INDUSTRIAL ALCOHOL CO. •

Psyllium Seed Factors

ONE of the interesting features in the psyllium seed market are the strides that the Indian, or blonde seed, have been making here. Considerable tonnage of this grade has already been sold and is now being offered for sale in retail packages. Spot quotations in bulk are made on the basis of from 8c to 9c per lb. as to quantity.

Trade Commissioner J. Bartlett Richards, Bombay, reports that production of psyllium seed in India for 1931 has been unofficially estimated at 11,000,000 pounds. In the local market, uncleaned seed with an allowance of 15 per cent. foreign matter was selling in May at $2.18 per 45 pounds. The prevailing export price was 30 shillings per hundredweight, c.i.f. New York, for seed with an allowance of 4 per cent. foreign matter, or 34 shillings per hundredweight, c.i.f. New York, for more carefully cleaned seed with only one-half of one per cent. foreign matter.

One of our subscribers in India has called our attention to a statement made in our May issue, in which we quoted Assistant Trade Commissioner Paul L. Hooper, Calcutta, to the effect that Plantago seeds grow best in a dry sandy clay soil and are found in Kashmir, Assam, Bhutan, Bombay and Nilgriris. This subscriber tells us that these are the wettest portions of India—the last places where plantago can grow—and that Ahemdabad and its surrounding districts comes first with 75% of the total production of plantago, Sind 15% and Cawnpore 10%. He also tells us that the harvest time is March-April, and that the seeds are available for export by May, not July or August as written in the report.

Old crop French seed is in limited demand and is being offered at from 45c to 50c per lb. The interest now centers in the new crop prospects and developments. In view of the low prices at which the blonde seed is selling, most importers in the local trade believe that the French shippers will find it necessary to reduce in order to compete with this material. This, to a certain extent, has already been done as French psyllium seed is gradually getting closer to the quotations prevailing on the Indian seed but the disparity is still great enough to give the Indian seed a decided advantage.

New crop shipments of French seed are expected in this market the latter part of August, these early shipments, it is said, commanding a premium of about 10 c per pound over the September-October positions. Seed for shipment after September is being offered here at about 20c per lb. The French crop, it is estimated, will run anywhere from 2,000 to 3,000 metric tons, which is the largest crop that has ever been harvested in France, or anywhere else.

The Spanish crop of psyllium seed, although of a very good quality, is not an important factor in the market because of its uncertainty. It is not expected this year to exceed 30 tons. Commercial Attache Charles A. Livengood, Madrid, reports that the 1931 crop, harvesting of which has already begun, will terminate about the end of July. Indications are that the crop will again be scarce on account of the lack of rains during recent weeks. As the psyllium seed in Spain is not cultivated but is gathered from wild stands the size of the crop, even when the plants are abundant, depends upon the number of gatherers. It is said that one of the principal reasons for the continuous decline in Spanish psyllium seed crops in recent years is the decreasing number of gatherers due to low wages.

Chamomiles Prices Sensitive

Hungarian chamomiles during the past month have receded to a level that is said to be the lowest in many years. It was reported in the trade that a price as low as 11c per lb. had been done. At this level there is undoubtedly no profit for anyone, and the rebound from this basis was not unexpected. The market is now generally quoted from 13c to 14c per lb. as the cheaper lots have been bought up. This, however, is still 1c per lb. below quotations of a month ago.

Although difficulty is still experienced by detentions, it would seem that the market is in a very sensitive position, namely that as soon as a certain lot is released the market has a tendency to slide off a cent or two. An ample new crop is now being gathered, with some shipments already on the way, so that although spot material continues in a small way the near future is expected to augment existing supplies here so that the undertone continues easy.

Golden Seal Higher

Golden seal root is higher in the spot market at from $1.15 to $1.20 per lb. The powdered is offered at from $1.45 to $1.50 per lb. The production of this commodity is reported as having been curtailed with the result that the market has taken on a firmer tendency with the possibility that there will be a general movement toward higher levels. The present basis of quotations is still considered low.

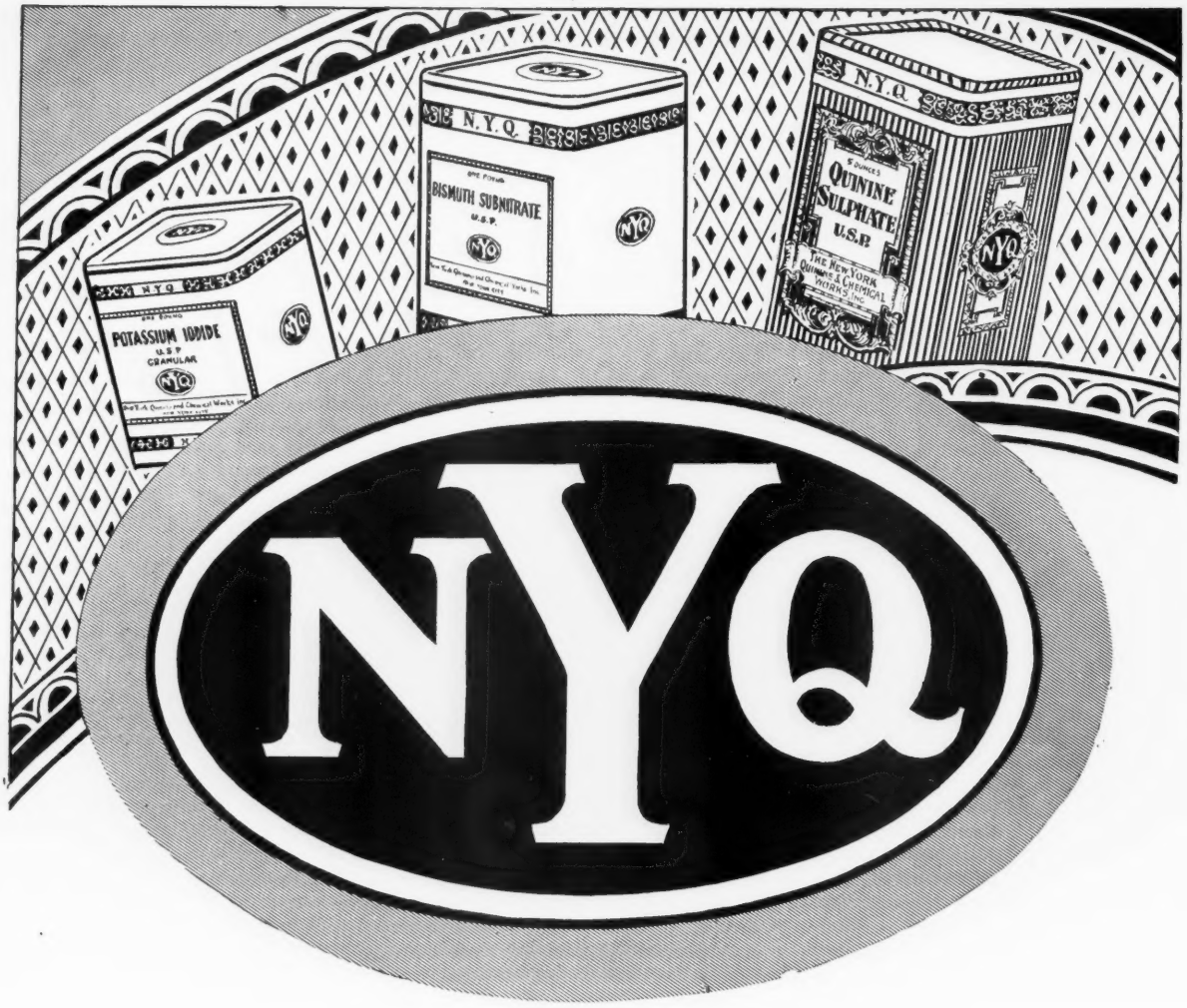
Aloes Easier

Curacao aloes have been easier on good supply and a minimum consuming request. Spot goods are offered for from 23c to 25c per lb.

The principal variety of aloes is Curacao, which grows abundantly in the West Indies. Other important species are socotrine aloes in northwestern Africa and Cape aloes in southern Africa. Curacao aloes are produced principally in the islands of Aruba and Bonaire. Tropical climatic conditions appear to be essential to the growth of these drug plants, with soil a minor factor. During 1927, the latest year for which statistics are available, shipments of aloes from Aruba amounted to 465,248 kilos and from Bonaire, 82,975 kilos. Imports of aloes into the United States have averaged approximately 1,000,000 pounds annually during the past 10 years.

Agar-Agar Up

The strength shown by agar-agar over the past several months continues with the market again advancing to the basis of $1.15 to $1.20 per lb. for No. 1, with No. 2 being advanced to from $1.07 to $1.10 per lb. These prices are reported as subject to further advances as they are below replacement cost at present. The primary market, where an undoubted shortage prevails, continues very firm.



Acetanilid	Cinchonidine	Quinidine
Bismuth Subnitrate	Morphine Sulphate	Thymol
Bismuth Subcarbonate	Ethyl Morphine	Salicylates
Cinchonine	Iodoform	Strychnine
Cinchona Alkaloids	Glycerophosphates	Bromide of Soda
Cinchophen	Opium	Bromide of Potash
Codeine Sulphate	Potassium Iodide	Bromide of Ammonia
Codeine Phosphate	Quinine Sulphate	Silver Salts

Menthol-Y (trade mark reg.) Vanillin

In bulk for manufacturers and in packages for wholesale trade

THE NEW YORK QUININE & CHEMICAL WORKS INC.

GENERAL OFFICES

99-117 North Eleventh Street, New York, Borough of Brooklyn

NYQ ST. LOUIS DEPOT, 304 SOUTH 4TH ST., ST. LOUIS, MO. NYQ

Menthol in Sharp Advance

MENTHOL, which as was pointed in our June report (page 579) was quoted in Japan at the lowest price of which we had record, has advanced sharply by 40 cents per pound to a level of $3.75 per pound on spot. Bullish factors forecast an immediate advance to $4.00 based on the Japanese quotations. While the advance has been accompanied with rumors of increased demand due to the infantile paralysis epidemic, (localized in New York City, mainly in the Borough of Brooklyn) the actual reason behind the advance was the concentration of the supplies on spot in the hands of one or two buyers. This coupled with the fact that the Japanese advanced their market, perhaps with the hope of inducing some purchases of their very large stocks before the new crop came upon them, confirmed our prediction made in our June report that a comparatively small amount of money could control this neglected market.

It was assumed by importers and dealers here that Japan, which had received practically no new business from the United States for several months had a considerable supply of menthol on hand, and being also faced with a new crop, would sooner or later break and offer goods for shipment at much lower prices.

Japan, therefore, was more or less ignored. The spot market continued to decline irregardless of replacement costs until it reached a basis considerably below the primary market asking price for shipment. However, very little concession was made abroad and no shipments made to this market for several months.

As a result of the general neglect of this commodity on the part of consumers and traders, spot stocks became over-depleted. In such a case shrewd traders with very little money could, as we previously pointed out, get complete control of the market. This is exactly what has happened. Business, although in a comparatively small way, has been steadily draining existing supplies, until inquiries suddenly brought out the fact that there is very little menthol around and what remains is in very strong hands.

It would appear, therefore, that higher prices are in prospect for some time. It also looks as though Japan has won in its game of outwaiting the other fellow. It is certainly logical to assume that spot stocks must very shortly be replenished and that the resultant demand for replacement will so strengthen the Japanese position that they will be in a position to finance and carry the new crop, first cutting of which is now being distilled. However, there is always the possibility of Japan dropping the price to induce more sales.

Kamala Market Soft

Kamala is freely offered in this market at from 48c to 55c per lb. This commodity has been declining for several months due principally to a lack of demand. Dealers here are well supplied, mostly with carryover from the last crop that has not as yet been moved. This has had a bad effect on the primary where a new crop is now on hand and where very few inquiries have been received from the consuming markets of the world.

The largest consuming field for this commodity in America is the poultry business, where it is used to dispel worms from chickens. This business is so bad that farmers are not buying kamala. Most of the dealers are carrying stocks from the last crop that in some cases they paid above 90c per lb. for. With business so bad, they are not even making an attempt to average their costs by purchasing lower priced material, as the prospects for the future do not look encouraging.

Tragacanth Remains Firm

Gum tragacanth has held well in the spot market in spite of the drastic declines that have taken place in most of the commodity markets. It is important to note that no changes have taken place in price schedules for several months past. Gum arabic, on the other hand, has been very weak, due principally to a fall in demand and a very large crop this year.

The reason for strength in tragacanth has been, not so much the normal demand, but that carryover stocks are not very large. Stocks available in June totaled 640 sacks. Exports during the month amounted to 119 sacks.

This commodity, however, is now faced with a new crop, the gathering of which begins about the middle of August, with arrivals in the market in September. The yield during the 1931 season in Turkey is expected to more than double the 1930 output of 1,500 sacks.

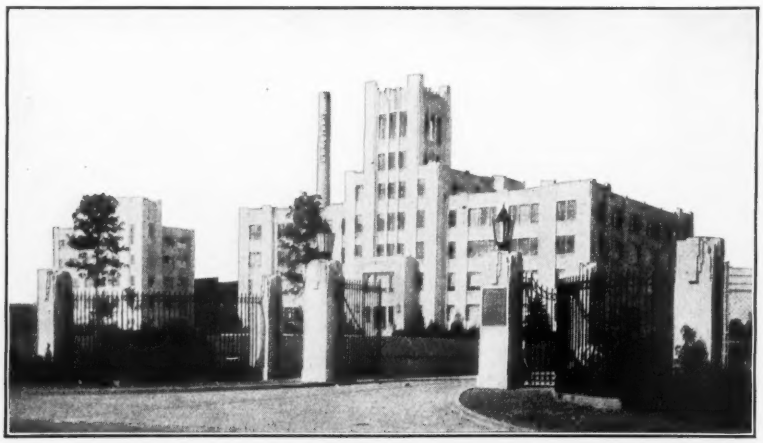
Greater Licorice Imports

The Department of Commerce in a report on licorice root state that large withdrawals from warehouses have been made subsequent to June 18, 1930, when this product was placed on the free list, this accounting for the appreciable increase in imports recorded for the year. Imports of licorice root in 1930, including warehouse withdrawals, totaled 177,611,000 pounds, valued at $3,045,600, as contrasted with 72,558,000 pounds, worth $2,058,000, during 1929. The leading suppliers of licorice root last year in the respective order of their importance were: Soviet Russia in Europe, Turkey in Asia, Iraq, and Spain.

American Herbs to France

It is estimated that the United States supplies about 15 per cent. of the medicinal herbs, leaves, roots, and barks used annually in France. The following drugs are reported to be purchased from the United States. The approximate normal annual consumption in France is: Barks: Cascara Sagrada, 4,000 to 5,000 kilos; cascarilla (quills and siftings), 1,000 kilos; Condurango, 4,000 to 5,000 kilos; Hamamelis, 2,000 to 3,000 kilos; and Simaruba and Verburnum Prunifolium, root, 1,000 kilos. Leaves: Hamamelis Virginica (witch hazel) 15,000 to 20,000; and Matico, 1,200 to 2,000 kilos. Herbs: Grindelia Robusta and Lobelia Inflata, 1,000 kilos; and Passiflora, 500 to 600 kilos. Roots: Hydrastis Canadensis, 1,500 to 2,000 kilos; Jalap Vera Cruz seven per cent., 2,000 to 3,000 kilos; Jalap Vera Cruz ten per cent., 1,000 to 2,000 kilos; Jalap Vera Cruz 15 per cent., 500 to 1,000 kilos; Polygala, 2,000 to 3,000 kilos; and Sarsaparilla (American, Honduras, and Mexican), 1,500 kilos.

ROCHE



FINE CHEMICALS AND ALKALOIDS

ARECOLINE
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Quinine Priced Lower

QUININE prices finally succumbed to the unsettled condition that has existed for some months and which was described in our July report. The extent to which those representing the independent Dutch manufacturer of quinine had to go to dispose of their goods finally forced the Dutch quinine monopoly to reduce the "official" price by 2c per ounce on two occasions one within a few days of the other. The total reduction on the sulfate and bisulfate therefore amounts to 4c per ounce bringing the prices to 36 cents per ounce. When the second reduction was announced, irregular reductions were also announced on the minor salts.

While it claimed that the independent sulfate was not sold below 38½ cents per ounce, and it is claimed that the prices of 36 cents that were done by the independent maker were only done on the bisulfate, it is now reported that a large lot of the independent quinine sold to someone for export was finally sold in this market for 36 cents.

While the market has a rather unsettled appearance even at the 36c price, some of those close to the monopoly are authority for the report that price readjustments are over at least as far as the monopoly is concerned. On the other hand unconfirmed rumors tell of a sale at 5% off the 36c price.

The monopoly made no attempt to offset the difference in cost between the sulfate and bisulfate and these two items remain priced at the same figure. In the past, the fact that the bisulfate contains less quinine than the sulfate and should be sold at perhaps 3 or 4 cents less than the sulfate from a cost angle has enabled the independent importers to run rather freely in the bisulfate market. This condition is likely to continue from all appearances.

The price of cinchona bark (from which the quinine is manufactured) is also priced lower by the monopoly. Production of cinchona bark in the Dutch East Indies in 1931 is estimated at 11,357,600 kilos, of which Java is expected to produce 9,800,600 kilos; Sumatra, 1,557,000 kilos, according to the Department of Commerce Trade Commissioner at Batavia. These estimates are based on returns from eighty-six estates growing cinchona. In March, Java produced 765,300 kilos, and Sumutra 138,900 kilos. Total production for the first quarter was 2,404,800 kilos.

Glycerin Unsettled

Glycerin continues unchanged from previous levels, namely 11½c per lb. for C. P. and, although this price is about as low as glycerin has ever sold at, the commodity fails to show signs of stability.

It is reported that some improvement has been noticed in shipments against contracts. The general run of business, however, is in the nature of small orders. An interesting fact regarding these small orders is that they are invariably for very quick delivery. This would certainly indicate that stocks in consumer's hands are low and that the long awaited buying movement cannot be much longer deferred.

Stocks of both crude and refined glycerin are heavy, this being the principal unstabilizing factor. With prices so near production costs, however, the market is not expected to go lower.

Cream of tartar is a highly competitive item and has been reduced during the past month to the basis of from 22¾c to 23c per lb. All tartar products abroad have been weak and declining for several months. Imported goods have been pressing hard for this market and have necessitated the revision in price of domestic cream of tartar.

Seidlitz mixture has dropped to the basis of from 14¼c to 14¾c per lb. in sympathy with the general decline in the price of tartar products. Competition is reported as keen.

Competition has been very keen in citric acid. During the month price has declined 1c per lb. to the basis of 35c for USP crystals, and 35½c per lb. for powdered.

Spearmint has declined to the basis of from $1.70 to $1.80 per lb. New crop prospects are good with the primary being easier and the spot market dull.

Vanilla Steady

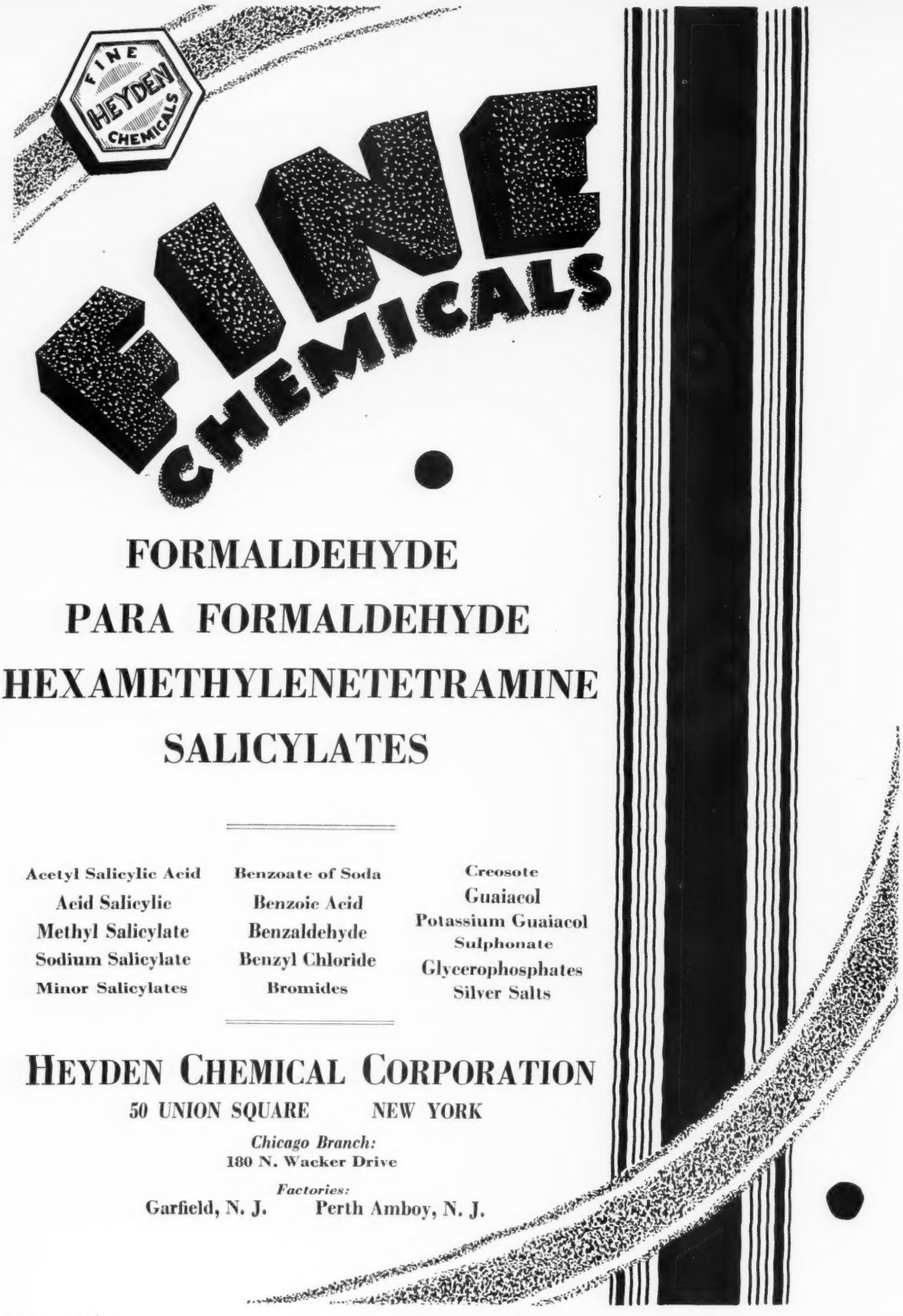
The Mexican vanilla bean market is firm at prevailing levels. The 1930-31 crop is now definitely fixed at from 150,000 to 170,000 pounds of whole beans and 50,000 to 70,000 pounds of cuts. Bourbons continue in supply but price remains unchanged at from $1.00 to $1.50 per lb. as to quality. Demand is reported as being of jobbing proportions with the tendency on the part of consumers to buy for the moment only and let dealers carry the stocks.

Netherland Oils

Trade Commissioner Don C. Bliss, Batavia, reports that most of the essential oil producing plants found in the Netherland East Indies grow wild and are gathered by natives. A few botanicals, however, are cultivated by the natives, usually in small patches near their homes, around the edges of the rice fields, or in similar locations. Patchouli, a native crop, is one of the few which is cultivated, although some fields of vetivert and palmarosa may be found in certain localities. Cajuput, cananga, and champaca trees are also encouraged by the natives to produce more heavily by transplanting and pruning seedlings. The principal cultivated crop is citronella, and practically all of the estates devoted to the production of essential oils raise this plant exclusively, although in isolated instances they may have limited areas in lemongrass, palmaraso, patchouli, or vetivert.

Clove oil is well maintained at the existing price of from $1.35 to $1.40 per lb. It is reported that delayed arrival of low cost spice has kept the price up.

Collections of elm bark from the new crop are reported in good volume and quality. The recent price readjustments are said to have placed the spot market on a firm basis that is likely to prevail when the real buying demand develops several months hence. Reports indicated that an ample supply will be available.



FORMALDEHYDE
PARA FORMALDEHYDE
HEXAMETHYLENETETRAMINE
SALICYLATES

Acetyl Salicylic Acid	Benzoate of Soda	Creosote
Acid Salicylic	Benzoic Acid	Guaiacol
Methyl Salicylate	Benzaldehyde	Potassium Guaiacol Sulphonate
Sodium Salicylate	Benzyl Chloride	Glycerophosphates
Minor Salicylates	Bromides	Silver Salts

HEYDEN CHEMICAL CORPORATION

50 UNION SQUARE NEW YORK

Chicago Branch:
180 N. Wacker Drive

Factories:
Garfield, N. J. Perth Amboy, N. J.

Camphor Strengthens

SPOT camphor has strengthened due to lessened supplies concentrated in a few strong hands. Prices are firm with leading importers quoting half-ounce tablets at 7c to 68c per pound.

The total value of 1930 exports from Taiwan, crude and refined, and camphor oil amounted to $2,408,000, reports vice consul Charles S. Reed II, Taihoku. This is a considerable reduction when compared with the unusually heavy shipments during 1929, totaling $3,667,000 in value. The shipments in 1930 were constituted as follows in quantity and value: Crude camphor, 1,332,000 kin valued at $648,000; refined camphor, 816,000 kin valued at $522,000; camphor oil, 4,098,000 kin valued at $910,000; refined white camphor oil, 785,000 kin valued at $83,000; refined Ho-white camphor, 853,000 kin valued at $91,000; refined brown camphor oil, 320,000 kin valued at $46,000; other camphor oil, 324,000 kin valued at $108,000. Direct shipments to the United States in 1930 were valued at $444,500 as against $600,000 during 1929 and $1,284,000 in 1928.

At the end of the fiscal year 1929 it is understood that the government had reforested 83,800 acres with camphor trees and that private interests, in private forests, had reforested 51,500 acres. Of this, however, only 53,700 acres were successful (Government 40,200 acres, private 13,500 acres). Of recent importance is the manufacture of disinfectants and perfumes in Taiwan from camphor oil, commodities which, it is reported, will soon be placed upon an export basis.

Imports of camphor into the United States were considerably lower in 1930 than those of preceding year.

The following statistics indicate imports of camphor into the United States during 1929 and 1930 (quantities in pounds):

	1929	*1930*
Natural, crude	4,204,000	1,058,000
Natural, refined	1,431,000	1,032,000
Synthetic	3,957,000	2,405,000

	Jan.-June, 1931
Natural, crude	*743,000*
Natural, refined	687,000
Synthetic	*1,055,000*

The yearly average of importations during the past five years is as follows: Natural, crude 2,680,000 pounds; natural, refined, 1,215,000 pounds; Synthetic 2,657,000 pounds.

Bismuth metal and salts remain unchanged on the spot with a regular demand reported. The fact that London quotations have been reduced to 6 shillings per lb. has not affected the spot market due to the fact that stocks are not over heavy and demand about normal.

Mercury Continues Down

MERCURY continues to decline sharply and is now offered in this market at from $85.00 to $87.00 per flask. Some stocks have changed hands at a price as low as $82.00, it is reported. Although the present market represents levels that have not been reached since 1926, it is the consensus of opinion in the trade that still lower levels will be reached before stabilization can be expected.

The conditions existing in this market are due to various factors. Production in the domestic mines has increased considerably, the first half of this year showing a rate that would equal 35,000 flasks per annum. This is some 10,000 flasks more than present domestic requirements, since consumption is reported in the United States to be off from 35 to 40 per cent. This decline in consumption, however, has been offset to some extent by the fact that the imported material has practically disappeared from this market, only about 200 flasks having been brought in up until May 31 of this year.

Under normal conditions domestic mercury should sell for from $1.00 to $2.00 below the cost of the imported, which is now about $100.00 to $102.00 per flask. The majority of the domestic mines, however, are poorly financed so that with the increased production and decline in consuming demand they have shown a steady tendency to force material on the consuming market being unable to carry them for any length of time. Competitive conditions among dealers in the spot market have also forced prices to lower levels.

A late and unconfirmed report states that several of the smaller mines have closed down being unable to produce mercury at prevailing market prices. This must eventually take place, or an export market be found for the surplus production.

Mercurials Lower

Due to the drastic decline in the cost of mercury, red precipitate has been reduced rather sharply to the basis of $1.90. White precipitate has also been reduced and is offered at $1.85 per lb. Mercury bichloride, crystals, is offered on the basis of $1.36 per lb., with the granulated powder at $1.21 per lb. Calomel has been reduced 7c per lb. to the basis of $1.75. Others in the mercurial group remain unchanged.

Rochelle Salts Off

Rochelle salt, in sympathy with the general weakness in most tartar products, has been reduced 1c per lb. to the basis of from 18c to 19c. Demand has been off with resulting competition as a factor in the decline.

Cod Liver Oil Holds

THE spot market for cod liver oil remains firm at prevailing levels of from $30.00 to $31.00 per barrel. There has been some improvement in inquiry noted and some contracts for fall shipments have been made. The shipment market remains strong with no inclination on the part of sellers to accept bids, but rather to advance prices as the heavy consuming season approaches.

A report from abroad states that the market is experiencing the usual quiet season at this time of the year, but the tone is well maintained and firm. Supplies in the hands of shippers are much below normal, the shortage of medicinal oil for the remainder of the year being fully 20,000 hectol. Quotations for finest non-freezing Lofoten oil, 112s. to 114s. per barrel, c.i.f.; spot, minimum five-barrel lots, 116s.; some grades may be slightly cheaper.

The final fishing figures for the whole of Norway are as follows: Catch of cod, 39,351,000, producing 58,950 hectol. of oil, against 61,640,000 cod and 78,338 hectol. of oil in 1930. Up to June 20, 33,136 barrels of oil had been shipped, against 34,068 barrels in 1930, leaving a shortage on remaining stocks of about 20,000 hectol. of oil.

An interesting comparison is that production this year is only slightly better than in 1928 when cod liver oil sold at $49.00 per barrel spot. Of course it must be taken into consideration that 1928 was a prosperous year with a large volume of buying but it must also be considered that the number of products containing cod liver oil has been steadily increasing in spite of general business depression. There is every indication therefore, to point to higher prices for this commodity as soon as the consuming season gets under way.

Senega Root Off

Senega root is lower in the primary market where a good harvest is reported. Several declines have been made in the spot market during the past month with the schedule of price now from 42c to 45c per lb. as to quantity. Foreign demand has been more or less dormant and as the export business takes care of the bulk of the trade in senega the undertone has not strengthened at the lower levels.

Digitalis Dull

A dull market prevails in digitalis, with interest principally centered in the fact that ample supplies seem assured for the next consuming season. The primary market conditions are favorable to buyers. Spot quotations are on the basis of from 11c to 12c as to quantity.

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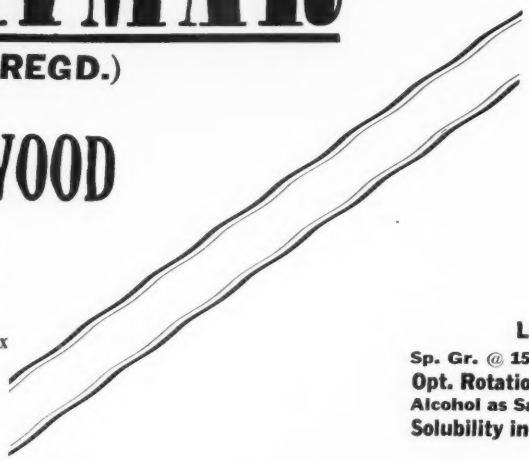

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Citrus Oils Appear Easy

THE spot market for citrus oils remains unchanged as far as price is concerned. Seasonal demand has kept prices at the levels reached during the advance of last month but dealers here are not inclined to look upon these prices as permanent. Shipment prices are expected to be lower in the not far distant future. Although it is undoubtedly true that the low prices prevailing in this group of oils has had the tendency to make producers neglect trees to some extent, with a resulting decrease in the amount of oil produced, the depression and small consuming demand has left considerable of the large production of the 1929-30 season still on the hands of producers.

Bergamot is reported in small demand with replacement and spot unchanged. Considering the carryover, which is reported large, and the lack of interest in the consuming markets, the general opinion is that replacements will be made at lower levels later on.

Lemon has a fair demand on the spot with quotations being maintained but this item, in view of a very dull primary market, is expected to sell lower in the near future. Reports from Italy state that, although storms the early part of this year destroyed 40% of the ripe fruit, the general slackness has kept prices at the lowest levels ever reached.

The spot demand for orange is reported as fair due to seasonal demand. Production of sweet oil of orange is said to be below normal as the price was so low that it did not pay to produce the oil and the fruit was therefore left to ripen.

Consuls Howard K. Travers, Palmero, and Robert R. Bradford, Messina, report that the essential oil market in Italy for June was reported as quiet and price changes were unimportant. Essential oil stocks were said to be ample for all needs and not materially reduced during the month. Quotations on June 22 in Italian lire per Sicilian pound Messina were as follows: Lemon sponge, 7.30; lemon machine, 5.20; sweet orange, 17.10; mandarin sponge, 27.20; and bergamot, 16.10. (The average value of the lira is $0.0523 United States currency and the Sicilian pound equals 317 grams).

Oil pennyroyal, European, is firm with reports that spot supplies are diminishing. There has been very little oil offered from the country of production with the result that $1.05 per lb. is being quoted on spot with no shading from this schedule.

Oil wormwood is easier as new crop shipments are now available. The market during the month has declined 25c per lb. and is now being offered on the spot at from $6.25 to $6.50 per lb.

Peppermint Oil Unchanged

With distillation of peppermint oil now under way a more generous tendency to offer has developed in the middle west. There is, of course, a certain amount of uncertainty still prevailing due to the recent reports of a short production, but the trade in general seem to feel that the carry over, which is rather large, will offset the reduced yield.

The spot market remains unchanged at from $1.80 to $1.90 for the natural, with redistilled at from $2.00 to $2.15. Dealers here are inclined to await further developments before committing themselves for any sizable quantities as a shortage indicated by producers does not seem likely.

Wormseed Oil Strong

Wormseed is the outstanding strong item in the essential oil market. Price has advanced sharply to the basis of from $2.90 to $3.05 on spot. Smaller acreage in the South has reduced production to a point where a normal yield is not expected. There is, however, a fairly large carryover but the primary market has shown little disposition to offer and are asking more for what stocks remain unsold. Dealers are inclined to accept the reports that a new crop below normal will be produced and look for a continued firm market for wormseed. They also point out that due to the carryover, no true shortage is expected and that prices will not, therefore, be inclined to very high levels.

Spike Lavender Firm

Spike lavender is firm at prevailing levels. Dealers are inclined to hold their stocks as the new crop now due has been delayed due to weather conditions. It is reported that a serious drought in the primary market has made it practically impossible to distill the oil. The natives use the water from mountain streams in their stills and as these streams are entirely dried up the work cannot go on until rains fill them up. The crop, however, has not been damaged by the drought and is reported to have done well and is merely awaiting the time when the rains will make distillation possible.

Cedarwood Oil Off 2c.

Cedarwood oil, for the first time in many months, due to an acute shortage of raw material, has eased up and is quoted 2c per lb. lower at from 33c to 35c per lb. It is reported that Oregon, a new scource for raw material, has eased the shortage at least temporarily.

Citronella Up Again

Citronella continues to be firm. Java has again been advanced to the basis of from 55c to 57c per lb. A good demand in the spot market is said to have depleted stocks which were not large. This stock shortage, it is reported, is only temporary as additional supplies are on the way and expected here shortly. In view of the strong position of the primary market for Java oil, importers will have to pay more for replacement so that a firm market is expected to prevail. Ceylon oil is in good supply with a comparatively small demand on spot and remains unchanged from levels quoted last month.

Geranium Lacks Strength

The demand for geranium failed to support the higher prices of a few months ago. There has been no shading, however, of quotations recently reached and Bourbon oil is still being quoted at $3.90 per lb. There does not seem to be any shading from this level sellers adhering to schedules. Turkish, however, is lower at from $2.10 to $2.25 but this grade of oil has been in supply and was not affected by the advance that took place in Bourbon a few months ago when reports eminated from the primary market that severe damage had been done to that crop.

Lime Oil Easier

Limes, which have been very strong and maintained at high levels for a long time, have eased off somewhat in the spot market. The distilled oil is offered at from $10.00 to $11.00 per lb., with expressed at about $12.50 per lb.

Little is known as to the prospects for the new crop now being distilled. The same conditions that have prevailed in the primary market for some time still exist to a certain extent but the fact that some new oil will shortly appear in the market has had the tendency to ease the situation.

Pepper Oil Down Sharply

Oil pepper has suffered a sharp decline during the past month. Price has been reduced $2.00 per lb. and is now offered on the spot at $6.00 per lb. The lower cost of raw material is primarily responsible.

This commodity formerly had a very large sale among the manufacturers of liquid spice who did a good business in the past. Dealers here were well stocked up to take care of this trade but the business suddenly fell off leaving dealers with a considerable amount of high priced oil to dispose of. This oil has now been cleaned up and the lower cost oil is now appearing on the market.

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Grasse Market Facts

By O. C. Zilisch

WHILE the Paris region continues to have rain, the South of France, including the Grasse district, suffers from excessive heat, which has adversely affected cultures like the olive. The jasmine, on the other hand, has reacted favorably, this culture seeming to thrive on heat, and at the present writing the first flowerings have appeared. In fact, in certain sections the gathering has commenced in a small way.

The jasmine situation resolves itself into the fact that if the entire yield were brought in, it would amount to 1,700,000 to 2,000,000 kilograms. As reported from month to month, the jasmine plantations, due to the unsatisfactory market prices paid last year, were neglected, the growers having become discouraged in the face of impossible prices paid for the jasmine flower. Some of those plantations that were a bit exhausted came in for a general cleaning up, and were consequently destroyed, which should normally have lowered the production figures. In fact, the actual production figures are below the normal.

Three Classes of Growers

There remain the three categories of growers, as explained in previous reports, namely: (1) those under contract; (2) cooperatives; (3) *producteurs libres*, or, literally, free frowers.

Those in the first category have accepted a price of 5 francs (20 cents) per kilogram. This price is based upon the average prices and weights of yields during the past two years, with the express condition that the yield be not gathered.

Those in the second category, namely the cooperatives, treat their own flowers.

The so-called free growers are those without any contract whatever, and which do not belong to any of the cooperative groups. Insofar as the future of this group is concerned, it is entirely in the hands of the distilling perfumers, and the price paid or offered is anything but encouraging to this group of growers. The Grasse Perfumers' Syndicate has offered 5 francs per kilogram, with the right to stop the gathering at will.

This means that the results all along the line will be the following: many of the growers will not gather the jasmine flower, because of the low price paid, with the result that the yield will not be more than 50 per cent. of the normal. Discouragement will be the ultimate result, and one must look forward to a certain suppression of plantations during the following winter. Those close to the situation are firm in their statement that the decrease in plantations throughout the entire region is very marked.

Among many it was hoped that no jasmine flowers would be gathered, in order to keep the essential oil market form becoming any more sluggish than it is. Jasmine stocks, as every one knows, are plentiful, with the result that the gathering of even half the yield will only tend to further encumber a market that is already too heavy in the way of stocks. This situation will only bring with it a continued depreciation with respect to jasmine flower products.

Vegetables or Perfumes?

The leading article in one of the important agricultural publications of the region for July is a clear statement with regard to the raising of vegetables to replace the rapidly declining series of perfume flower plants, for which the Grasse section has been famous for years. One of the vegetables most favored from the point of view of yield, possibility of market, etc., is the humble potato. Apparently, experiments made at the Garden for Experimental Research have proved eminently satisfactory.

Other vegetables are, of course, also in line for intensive development, and every attention is being given to the questions involved, particularly the important matter of seeking markets beyond those near at hand. The article mentioned above brings out the fact that other departments in France, particularly Vaucluse, have succeeded in building up markets as far away as Paris and London. With this example before them, the growers in the Grasse region are getting together for a real effort along the lines of general vegetable growing, to replace the discouraging cultures that have kept generations busy in the Grasse region. Anyone who is in touch with the *real* situation knows that something definite is happening in the Grasse region, and there is no denying that unless the present world crisis, affecting essential oils as well as other things, lifts, the growing of perfume-flower plants in the Grasse region will see a continued decline for some time to come.

Predictions given in reports from month to month have come only too true, as developments have shown, and the result for the future of the region involved can only be guessed at. One guess is as good as another now, with certain conditions existing that are anything but satisfactory. The standstill in business seems to be general, with the perfume industry hit in proportion. The next twelve months, or even less, should prove interesting one way or the other. If the declines continue, the result to be awaited will be anything but pleasant.

Rose Yield 50%

The rose yield, terminated the last days of June, has been definitely reported as being 50 per cent inferior to normal, with market prices for flowers varying between 1 franc 25 centimes (5 cents) and 1 franc 55 centimes (6 cents). These prices are, of course, ridiculously low, with the result great discouragement has taken hold of the growers of roses in the Grasse region, as already reported previously.

From those close to the soil and the problems of the growers comes the statement that absolutely no new plantations will be created this year, due to the discouragement resulting from the low prices offered and paid. Just what this will mean for the growing of the well-known *rose de Grasse* is now a matter of conjecture. It is hoped that the signs of amelioration that appeared on the horizon recently, as reported last month for the cultures in general, will continue to exist in fact. Rose plantations still in existence are being more and more neglected.

One of the cultures that has shown the most favorable results from the point of view of the grower is the orange tree, because the flowers, the branches, and the fruit can be utilized. In this way, the grower of orange trees finds himself able to make both ends meet. The price paid this year for the orange flower, for example, although low, was regarded as being passable.

An effort is being made at the present time to find a larger outlet for products of the orange tree, with the result that a number of growers see a more brilliant future ahead than before. The crisis which has hit the Grasse region put many

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New crop prices for Italian citrus oils are quoted slightly higher than those which have prevailed for the past few weeks. In spite of these higher quotations from Italy, substantial advances are unlikely, but to-day's prices represent the most favorable levels witnessed in many years. We recommend purchasing at this time, and will be very pleased to submit samples and, quote prices on specific quantities.

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of the people in that region on their toes, giving them something to work on in the way of a problem that is interesting, to say the least.

Lavender distillation has begun in the South of France, with the flowers reported as not being very abundant. Market prices for flowers remain about the same as those existing at this time last year. As reported in the August 1930 issue of Drug Markets, lavender plantations were established in various departments throughout France the moment it looked as though there was to be some money made in the growing of lavender. The result was, of course, over-production, the bugbear of so many countries at the present time. Growers, running into the world crisis, became discouraged, and this year's lavender crop will, therefore, run below what is considered the normal for this culture.

Some time ago it was reported that a number of the cooperatives would not distil this year's crop of lavender, but apparently the situation has lightened sufficiently to permit the cooperatives to do something with the crop in spite of conditions somewhat unfavorable, insofar as the market prices of lavender products are concerned. The yield of oil up to the present time is satisfactory from every point of view.

Latest prices quoted for lavender products are: Apt, the twentieth of July, lavender oil from last year's yield, 44 degrees, 80/100 francs per kilogram. Apt is in the Vaucluse department, where Avignon is located, and gathering of flowers for this season began some little time ago.

Labor is scarce in the Vaucluse department, the Avignon section of this rich district being called the golden door of France. Unemployment in that region simply does not exist, and everyone who wishes to work can find it. In fact, the contrary is the case, and work goes begging in the Vaucluse department. This situation is, naturally, hitting the lavender gathering some this year.

Prices for flowers are quoted as 50 to 60 francs ($2 to $2.40) per 100 kilograms, delivered to the distilling perfumers' places of business. Gathering is paid for at 28 to 30 francs ($1.12 to $1.20) per 100 kilograms. The foregoing applies to the Apt district.

In the neighborhood of Moydans (Hautes-Alpes) the price paid for the lavender flower is given as 65 francs (2.60) per 100 kilograms. Good oil of lavender is bringing in this region 110 francs ($4.40) per kilogram. About half the normal yield is predicted for this section of France.

Oil of lavender is being watched very closely, because of the disappointment it has brought to those engaged in distilling it. Some distillers are putting away stocks against the day when the crisis lifts, particularly those who are in a strong financial position to do this. Everyone feels that the crisis can not continue over an indefinite period of time, and at least a spirit of hope is pervading everything. A certain amount of underselling has taken place, but not too much, because most of the distillers know the inevitable evil effects of such practices. Prices have gone down to what is regarded as actual rock bottom. Any downward movement would spell ruin for some holding stocks that cost them money to put aside. As the trade will recollect, oil of lavender at this time of year last season could be secured for 145 to 155 francs ($5.80 to $6.20) per kilogram for the 40° oil. At that time a rise in price was considered positive, but the months that have passed since are there to prove that a decline was in order.

Market prices of oils in Paris, as given by the business publications there, were recently: Spike lavender, French, 50 francs ($2) per kilogram; lavender 37/38 degrees, 135 francs ($5.40) per kilogram; sage (Provencal), 60 francs ($2.40) per kilogram; clary sage, 900 francs ($36.00) per kilogram.

A general article on lavender appears in another section of this issue.

Plantations of mint, rose geranium, tuberoses, and other cultures of secondary importance, are decreasing each year, with very little being done with any one of them in the Grasse region at the present time.

An interesting sidelight on the odor of peppermint appeared in one of the agricultural papers of France recently. Apparently, rats and mice find the peppermint odor very disagreeable, and farmers farmers bothered with these rodents are being advised to gather up the stalks and leaves of the green peppermint and to allow them to dry in the shade.

The olive crop for this year in the South of France was reported as promising during the past few months. Dry weather has, however, upset the predictions a bit, and it is now thought that the yield for this year will suffer a considerable drop in amount. However, a little rain may change the situation rather quickly. Articles on the olive situation in France and Algiera appear elsewhere in this issue.

Orris Root Declines

Orris root is competitive and easier on the spot. Verona powdered is quoted at from 14c to 15c per lb., with reports eminating from some quarters that as low as 13½c can be done. Supplies are good but the consuming market is very slow.

Orris root is produced in central and southern Europe, the center of cultivation being Tuscany. Imports of orris root into the United States more than tripled in quantity during the period 1921 to 1929, inclusive, or from 225,000 to 700,000 pounds. Imports fell to 180,500 pounds in 1930.

Alcohol Up

THE price of C. D. No. 5 alcohol has been advanced 1c per gallon to cover the additional cost of denaturing with the new formula as compared with the old alcotate formula at which cost the alcohol business in the price war of a few months ago was taken. There is a clause in the contracts providing for the likelihood of the Government changing the formula and calling for the charge for additional cost being passed on to consumers. The cost of denaturing the alcotate formula was in the neighborhood of $1.50 per 100 gallons, while the cost of the new formula is about $2.50 per 100 gallons, making an additional cost of 1c per gallon.

Notices to this effect were sent out by the large distillers on July 21, effective as of August 10. This notice also specified that any increase in freight rates granted the railroads would be for the account of the buyer. Alcohol now sold on contract but delivered after August 10 would be invoiced at the higher price prevailing then. In order to secure the advantage of present prices, contract quantities must be ordered shipped at the earliest possible moment. This has increased shipments considerable so that the leading distillers report a good movement for this time of year.

A new denatured alcohol formula for use in the manufacture of shellacs and varnishes was announced July 11 by the Bureau of Industrial Alcohol, Department of the Treasury, to become effective July 15.

This formula, to be known as specially denatured alcohol formula No. 1-A, was approved by Seymour Lowman, Acting Secretary of the Treasury, and William D. Mitchell, Attorney General. The statement of the Department follows in full text:

Effective July 15, 1931, the following formula, to be known as specially denatured alcohol formula No. 1-A, is hereby authorized for use in the manufacture of shellacs and varnishes:

To every 100 parts by volume of ethyl alcohol of not less than 160 degree proof, add 10 parts by volume of denaturing grade Isopropanol, 5 parts by volume of commercial Alpha Terpineol.

Ergot Supplies Abroad

Stocks amounting to 15 or 20 metric tons of high quality ergot from the 1930 crop were in possession of Spanish exporters in June, 1931, says Consul Walter H. McKinney, Vigo. Up to the above date 21,000 pounds of ergot had been shipped to the United States, and it is believed that total shipments to this country for 1931 may approach or possibly exceed the 1930 aggregate of 68,400 pounds.

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CONSTANTIN MINTCHEFF, KETCHEDJIEFF
Kazanlik, Bulgaria
Otto Rose

H. RAAB & CO.
Roermond, Holland
Artificial Musks

P. R. DREYER *Inc.*
26 CLIFF STREET,
NEW YORK, N.Y.

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News

Company News

Vapex (E. Fougera & Co.) has incurred the enmity of the American Medical Association Bureau of Investigation, which, in the "Journal of A. M. A.," July 18, published a bitter attack on this product. Although the number of near imitations of Vapex are testimony to the fact that the product defies analysis, and although Vapex has been variously reported from expert analysts to be (1) an acetone solution of peppermint and lavender oils; (2) an alcohol and acetone solution; (3) an alcohol solution of menthol, lavender and eucalyptus; the A. M. A. claims to have put together ingredients which give approximately the same specific gravity, optical rotation, refractive index, oil volume, and amount of water to produce turbidity, and blandly gives the formula as 15 gm. menthol, 15 cc. lavender oil, and 94 per cent. alcohol to make 100 cc.

On the basis of this analysis, the Bureau ridicules the claims for the product, and deduces that the ingredients of the $1.00 list retail price bottle of Vapex cost 7 cents.

Bureau also attacks basis of claims made by Fougera for Vapex and incidently attacks Pease Laboratories for making the tests. It states that Vapex should carry an alcohol statement on the label in accordance with section 8 of the Food and Drug Act.

Says the guiding genius of Fougera, Montaigu M. Sterling, "There is no one in this country who knows the composition of Vapex . . . Further experiments have definitely proven our claims for the product . . . The attack is good advertising . . . Friends congratulate us on being admitted to the elite among the drug manufacturers."

Maltine-Certifoods

A new entrant into the merchandising of sieved vegetables for children and invalids will be the Maltine Co. which has combined with Curtice Brothers (Blue Label products including ketchup) under the name of Certifoods, Inc., to handle this one line. Both Maltine and Curtice will continue with their own products as heretofore.

Particularly interesting in Maltine's entrance into the products of Gerber (the largest), Clapp (J & J owned), and Van Camp, is the fact that with A. M. A. approval, Certifoods will make definite label statements of the quantity of each vitamin occurring in the sieved spinach, carrots, green beans, peas, tomatoes, and vegetable puree. Such statements are made possible by a new vacuum process, patent upon which has been applied for.

James C. Chilcott

Also interesting is the fact that James C. Chilcott, vice-president of Maltine, will be president of Certifoods.

Products will be made and packed in plant of Curtice Brothers under vitamin assay control carried out in Maltine's well equipped laboratory. Goods will be shipped to Maltine which company will handle the marketing through drug and grocery stores.

Du Pont Buys Newport

E. I. du Pont de Nemours & Co., Inc., has purchased the dyestuffs and organic chemical business of the Newport Co., Milwaukee, giving 103,500 shares of 6 per cent. debenture stock, representing about $12,000,000 for this acquisition. The wood distillate division of the company and its naval stores units (i. e. the non-profitable branches of the company's business) do not figure in the transaction.

Chief interest of the du Pont company centers in the Newport Chemical Works, Passaic, N. J., manufacturer of dyestuffs, intermediates, medicinal, and pharmaceutical chemicals, and aromatics. This latter company, in 1929, acquired the business of the Rhodia Chemical Co., whose plant is located at New Brunswick, N. J., and which specializes in pharmaceutical, photographic and aromatic chemicals. In addition to these two plants at Passaic and New Brunswick, a third Newport plant at Carrollville, Wis., is involved.

It is the intention of the du Pont company to consolidate the Newport dyestuffs and organic chemicals business with those of its own dyestuffs division. The policies and operations of the acquired businesses will be continued substantially as before.

Newport reported a net profit of approximately $483,000 for the six months ended June 30, after depreciation. Federal taxes and other charges. This compared with a net of $690,836 for the first half of the previous year. Net sales of the company for the first half of this year totalled $4,606,000 against $5,603,101 in the corresponding period of 1930.

The net for the second quarter of this year aggregated $242,000 which compared with $264,819 same period last year. Current assets as of June 30 last were $5,182,000 and current liabilities mounted to $529,000, a ratio of almost 10 to 1.

Additional Aromatics

Newport Chemical Works, Inc., Passaic, has added two new aromatic chemicals to its line, benzophenone and dimethyl hydroquinone.

Naugatuck Aromatics

Bushfield, Inc., New York, founded and managed by Burton T. Bush, for many years closely identified with the essential oil and aromatic chemical business, has been appointed sole sales agent for the Naugatuck Chemical Co., Naugatuck, Conn., U. S. Rubber Co. subsidiary, U. S. Rubber, in turn, is du Pont controlled.

Naguatuck Chemical has been producing some aromatic chemicals for several years but has recently formed an aromatics division under its policy of expanding the scope of its research and development departments so as to provide for the use of each raw material, intermediate, or by-product produced in the chemical works. In addition to the plant at Naugatuck, the company maintains a research laboratory at Passaic, N. J., and close cooperation will be maintained between that laboratory and a special service laboratory maintained in New York by Bushfield, Inc.

Shapiro Buys Michigan Drug

Michigan Drug Co., Detroit, wholesaler, has been sold to Nathan S. Shapiro, president, Economical Drug Co., Detroit chain stores. The Shapiro chain is part of the $135,000,000 Retail Druggists of America. The factory sales division and the stock of Michigan Drug has been taken over by McKesson-Farrand-Williams Co., the only remaining service wholesale house in Detroit, as part of the liquidation process.

Would you like to examine a copy of this book

The wealth of information it contains may save you many times the slight bother of dropping us a line.

Here are the contents of Drug Markets CATALOG and DIRECTORY . . . . .

Machinery
Equipment

—

Glassware
Boxes
Collapsible Tubes
Cans
Seals for Bottles, etc.
Liners (cap)
Shipping Materials
Shipping Containers
Papers
Labels
Cosmetic Specialties

—

Fine Chemicals
Medicinal Chemicals
Industrial Chemicals
Photographic Chemicals
Solvents
Raw Materials
Glandular Products
Oils
Waxes
Cosmetic Materials

—

Essential Oils
Aromatic Chemicals
Gums
Flavors

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Botanical Drugs
Spices

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Association Members
Prices (Range)
Imports (10 years)

If you have not seen Drug Markets CATALOG and DIRECTORY, you surely do not realize how complete and valuable a reference book it is.

It contains a directory for more than 2,000 products—a thoroughly well edited directory too. But the directory is just the beginning of the value of the book.

Each one of these products, which cover the whole range of materials, equipment, packages, etc. used by manufacturers of pharmaceuticals, toilet preparations, cosmetics, proprietary medicines, flavors and products of a similar chemical nature, are accurately and completely described.

Buyers, chemists, plant managers, have written us enthusiastic letters on the value of this book.

We would like to have you examine this book with no feeling of obligation. Then if you find it thoroughly worth while, a subscription to DRUG MARKETS at three dollars a year gives you the book free. Otherwise return it in ten days at no cost. Get a personal copy of this book and DRUG MARKETS. Drop us a line to send you the book.

We are in receipt of your Directory which is certainly very well gotten up and most complete.
Bert O'Leary,
Kiefer-Stewart Company

We undoubtedly will find a great deal of use for this publication (Drug Markets Catalog).
John R. McClelland,
The Kolynos Company.

It is one of the finest publications of its kind which it has been my pleasure to inspect. I assure you it will be employed frequently in our institution.
Bern B. Grubb, Pres.,
Lafayette Pharmacal Inc.

We compliment you on this very interesting and instructive compilation of unquestionable value to the industry.
F. K. Thayer,
Abbott Laboratories.

Congratulate you on the interesting manner in which you have assembled the information—a splendid work.
G. C. Parsons,
The Arner Co., Inc.

It makes quite an impressive volume and we expect to find it very useful.
R. Roy Miskimon,
Ciba Company, Inc.

We want to compliment you on the wealth of information contained in your book.
John P. Curran,
Curran Laboratories, Inc.

Your book is a veritable encyclopedia—its structural details are superlative and worthy of commendation.
M. Lemmermeyer,
Givaudan-Delawanna, Inc.

The Catalog in our opinion is very well gotten up and contains a mass of information which is bound to prove helpful from a reference standpoint for months to come. We have occasion to refer to it frequently and we know we will find it of value to us.
H. F. Brownell,
McKesson & Robbins, Inc.

We appreciate your sending this to us, and shall make good use of it.
The Pompeian Company, Ltd., Canada.

DRUG MARKETS, INC.

101 West 31st Street New York City

Corn Prod.—Comm. Solvents

Corn Products Refining Co. has secured a substantial interest in Resinox Corp., previously a wholly-owned subsidiary of Commercial Solvents Corp. Resinox is interested in development of synthetic resins and has a plant at Metuchen, N. J.

Parke, Davis Buys Bay Co.

Parke, Davis & Co., Detroit, has acquired the Bay Co., Bridgeport, Conn., manufacturer of surgical dressings, through the exchange of 113,025 shares of Parke, Davis stock representing close to $3,000,000, for the outstanding $244,800 preferred and 103,025 shares of common of the Bay Co., Charles U. Bay will be added to the board of directors of Parke, Davis and continue in the management of the Bay company business.

Alcohol Diversion

Sixteen corporations and thirty-six individuals were indicted in Baltimore, July 20, by the Federal Grand Jury on charges of conspiracy to violate the prohibition laws. The sixteen corporations named were: Agricultural Chemical Works, Newark, N. J.; Amazon Industrial Chemical Co., New York; American Oil & Supply Co., Newark, N. J.; American Solvents & Chemical Corp., New York; American Solvents & Chemical Sales Co., New York; Baltimore Paint & Color Works, Baltimore; Filben Chemical Co., New York; Glidden Co., Cleveland; Midwest Chemical Co., South Kearney, N. J.; North Hudson Chemical Co., New York; Roessler & Hasslacher Chemical Co., New York; Sagovitz & Sons, New York; Southern Lacquer Co., Baltimore; Syrup Products Co., New York; U. S. Industrial Alcohol Co., New York; U. S. Industrial Chemical Co., New York.

The thirty-seven individuals named were: Sam Albrecht, Baltimore; Albert M. Barnett, Jersey City; George Bernstein, New York; Max Bittman, Newark, N. J.; John J. Butler, American Solvents & Chemical Sales Co., New York; Joseph J. Darvin, president, Amazon Industrial Chemical Co., New York; William L. Due, sales manager, American Oil & Supply Co., Newark, N. J.; Aaron A. Eisenberg, Southern Lacquer Co., Baltimore; Benjamin N. Eisenberg, Southern Lacquer Co., Baltimore; Ennio A. Ferretti, New York; James Francis, Baltimore; Louis Fredello, Bayonne, N. J.; Benjamin Friedman, Philadelphia; William Friedman, Philadelphia; William S. Hatten, Lansing, Mich.; A. H. Jaffe, Cleveland; Arthur P. Jell, vice-president, American Solvents & Chemical Sales Co., New York; Joseph Jenkins, Bayonne, N. J.; David B. Kapaus, Midwest Chemical Co., South Kearney, N. J.; Morris B. Kapaus, Midwest Chemical Co., South Kearney, N. J.; H. W. Leskowitz, Newark, N. J.; Rudolph Lesser, Albany; Morris Levine, Amazon Industrial Chemical Co., New York; John A. MacGruer, Albany, N. Y.; Norman Paul, New York; Max Sagovitz, New York; Fred Sani, Bayonne, N. J.; Nate Scharlin, Amazon Industrial Chemical Co., New York; Harry Senior, Amazon Industrial Chemical Co., New York; Louis B. Sless, New York; Gracento T. Soresi, Copaque, L. I.; Walter Spreckles, former president, Syrup Products Co., New York; Herman Steinberg, Philadelphia; Michael Steinberg, Philadelphia; William Ulrich, Newark, N. J.; Harry Vice, Midwest Chemical Co., South Kearney, N. J.; Louis Vice, Midwest Chemical Co., South Kearney, N. J.

Corn Products Infringes

Corn Products Refining Co. has been ordered to render an accounting of profits resulting from the infringement of the Widemer patent used in the manufacture of corn starch, which patent is now owned and held by Penick & Ford, Ltd. Corn Products' patent (McKoy) was held invalid.

Inecto Objection Denied

Objection of Inecto, Inc., New York, to registration by Rozalja B. Vogel, New York, of a trade-mark for hair dye, consisting of the word, "Lovelox," printed beneath the same word in Russian characters, was dismissed by U. S. Patent office. Inecto objected that it might be confused with trade-mark "Notox" used on hair dye but it was ruled that the two marks had no similarity.

McK & R in Canada

McKesson & Robbins, Inc., is planning to lease additional space in Montreal to permit expansion of operations by its Canadian subsidiary, McKesson & Robbins, Ltd., Montreal.

Monsanto Warehouse

Monsanto Chemical Works is constructing a warehouse at its Monsanto, Ill., plant at estimated cost of $100,000.

Pepsodent Building

Pepsodent Co., Chicago, is planning the erection of a new one and two-story building, estimated to cost over $500,000, on newly-leased property at 6901 West 65 st., that city.

More Borax and Potash

Burnham Chemical Co. is planning to erect a plant for the manufacture of borax, potash salts and other products on its property at Searles Lake, Calif.

Colgate in Germany

Colgate-Palmolive-Peet Co.'s appeal in the German courts against a decision finding it guilty of making statements prejudicial to German soap manufacturers in advertisements appearing in Germany, was denied and the company must pay damages and provide security against the repetition of such practices. The court held that the said advertisements were not "compatible with the principles of sound business integrity."

Proctor & Gamble in Cuba

Proctor & Gamble have taken over the assets of Sabates, Havana, the second largest producers of soap and candles in Cuba.

News Stand Soap

National Pine Tree Products Co., New York, has made arrangements with the Union News Co., to have its "Pine Tree Soap" sold by the stands of that company.

Fritzsche Birthday

Fritzsche Bros., Inc., New York, essential oils and other perfume materials, celebrated the sixtieth anniversary of its founding on August 2. Significant dates in Fritzsche Bros.' history are: 1871, founded by Paul T., Herman T. and Ernst T. Fritzsche as the firm of Fritzsche, Schimmel & Co., to distribute in the United States products manufactured by Schimmel & Co., Miltitz, Germany; 1895, F. E. Watermeyer joined the company and 1913, when he took over the active direction of the business and purchased the interests of the parent firm.

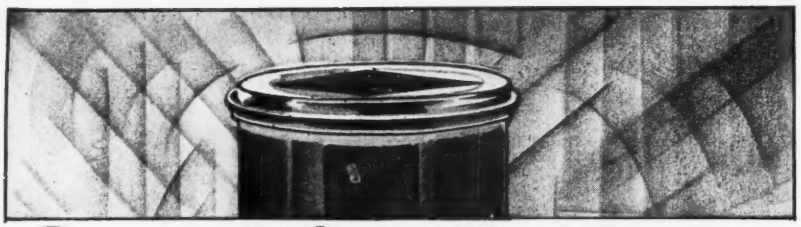
Fritzsche Bros., Inc., was incorporated in 1919 with F. E. Watermeyer, president; F. H. Leonhardt, vice-president; the late Julius Koehler, secretary; and William A. R. Welcke, treasurer. B. F. Zimmer and George L. Ringel have since been elected second and third vice-presidents and A. D. Armstrong, secretary.

Since the first branch office was established in Chicago by President Watermeyer in 1895, seven others have been added: 1900, Cincinnati, (now Columbus); 1902, Boston; 1905, Kansas City, San Francisco (now Los Angeles) and New Orleans; 1913, Philadelphia; and 1922, Toronto, Canada.

Besides representing Schimmel & Co. in this country, Fritzsche Bros. manufactures its own products at Garfield, N. J., and sells the products of Parfumeries de Seillans, a recent acquisition located in Seillans, France.

Drury Gets Tube Account

A. C. Drury & Co., Inc., Chicago, has been appointed mid-West representative for Pennsylvania Collapsible Tube Co.,



Come to Closure Headquarters

FOR GOOD LOOKING CLOSURES ★

• IT IS an admitted, provable fact that consumers respond to improved looks in a package—certainly an important sales advantage—but that is not the sole benefit. Good looks help out all along the line.

Retailers appreciate a package that looks well. Instinctively it is put out in front—in their display cases, in their windows—and in their minds. They like to handle it and push it because, other things being equal, such a package sells better and helps their turnover.

Wholesalers like good looks in a package for much the same reasons. Anything the public and the retailers like generates reflected enthusiasm in them.

Package appearance is, of course, due to a combination of things. But the closure plays an important part. It can make or break the entire effect. For that reason Anchor has always paid particular attention to appearance—in the design of the caps themselves—in its recommendations of the most suitable style for new products or for the re-design of an old package—in promoting the use of attractive lithographed caps, especially designed to harmonize with the rest of the package—in special coatings and other decorative effects—in our new line of Molded Caps in jet black or colors.

In considering a change or a new package, let Anchor work with you to get maximum appearance with effective sealing results.

We will be glad to study your problem and make recommendations. Just write us what you have in mind or send us a sample of your present package.

Anchor Cap & Closure Corporation
Long Island City, N. Y. Toronto, Canada
Branches in all Principal Cities

DECORATED CAPS

help a lot... and cost but very little more...

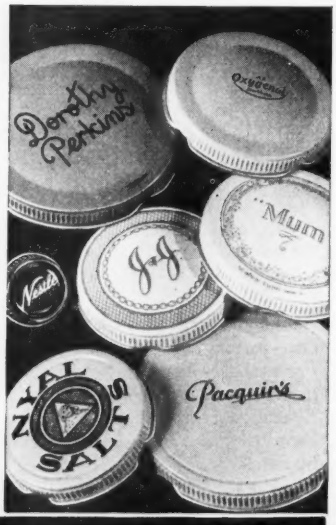
A colorful, attractively designed lithographed cap will increase the sales effectiveness of your packages. Also, it can incorporate your name, slogan, trade-mark, or other mark of identification.

Such a cap improves the appearance of any package. Its coloring and design help to distinguish it from others on the dealers' shelves. It lends an atmosphere of quality to your product. It creates a favorable reaction towards your package, and serves as a permanent identification in case the label should fall off or become defaced.

Many of our customers have found lithographed caps especially helpful in introducing new ways in which to use their product through the featuring of recipes. Some advertise their complete line of products on the caps or one or two items which they particularly wish to push. Still others find them valuable for the purpose of instruction on the proper use of the contents.

Lithographed caps offer you infinite possibilities. We have just mentioned a few.

Let us show you how attractively and economically a lithographed Anchor cap can be prepared for you.



Anchor CONSUMER-APPROVED CLOSURES for every Packing Need

Williamsport, Pa., and Theodor Leonhardt Wax Co., Inc., Haledon, Paterson, New Jersey.

To Sell Direct

Marinello Co., New York, toilet preparations, has arranged to carry stocks in Los Angeles so as to sell southwestern retailers direct instead of through jobbers.

Hagerty Robbed

Haggerty Bros., New York, glassware, was robbed of $150 in cash by six armed robbers who forced an entry and held up the employees, August 1.

Reciprocity

National Adhesives Corp., New York, adhesives, and Standard-Knapp Corp., labeling machines, have come to an agreement by which the former will service for adhesives all machines sold by Standard-Knapp. The latter, in turn, is recommending National Adhesives products and using them exclusively for its own experimental work.

New Offices

American Commercial Alcohol Co., New York, has leased space on the forty-sixth floor of the Chrysler Building for executive and sales offices.

New Products

FENCHIN

Health Research Laboratories, Oakland, Calif., has introduced a new product, "Fenchin," said to reduce swellings in cases of arthritis, rheumatism and uric acid poisonings in general.

SINA-SIPTEC OINTMENT

American Drug Corp., St. Louis, is offering a new product, "Sina-Siptec Ointment" for treatment of nasal congestion.

PLOUGH ADDS TWO

Plough, Inc., Memphis, toilet goods, has added two new products to its line, a shaving lotion and a skin tonic and astringent.

STAPH-O-CIDE

Marshall Products Co., St. Louis, is conducting tests prior to marketing a new antiseptic liquid soap, "Staph-O-Cide."

MONSANTO ADDS TWO

Monsanto Chemical Works, St. Louis, has introduced two new products, not hitherto produced in America and on a small scale only in Germany—pyrocatechol and phthalyl chloride.

RETENONE

"Retenone," extracted from roots of certain tropical plants, has been discovered by scientists in the Department of Agriculture as a new insecticide for vegetable and fruit plants.

NOTICE

Every subscriber has by this time received his copy of Drug Markets 1931 Catalog and Directory. If, for any reason, you have not received your copy, write to us and we shall be glad to remedy the oversight.

HOG'S STOMACH

Hog's stomach, as a treatment for pernicious anemia, is advocated by Dr. John F. Wilkinson, director of the laboratory for clinical investigations and research at the Manchester Royal Infirmary, England.

THE NEW YORKER

Groshur Tonic Co., Inc., New York, is marketing a new hair tonic, "The New Yorker."

NEW FILTER

Alsop Engineering Corp., New York, liquid handling equipment, has placed on the market a new type of filter, which, it is claimed, will produce results heretofore regarded as unobtainable. The filter is said to produce a crystal clear product without recirculation, without the necessity for skilled operation, and without sacrificing filtering speed. A complete range of sizes is available from the small laboratory model to a large production unit.

A. M. A. Accepts

LEDERLE LIVER

Liver Extract Lederle—A concentrated, water-soluble, nitrogenous, nonprotein fraction obtained from fresh mammalian liver. Manufactured by Lederle Laboratories, Pearl River, N. Y.

HIXSON VACCINE

Antirabic Vaccine—(N. N. R., 1931, p. 338). An antirabic vaccine prepared according to the general method of David Semple (phenol killed). Manufactured by Hixson Laboratories, Inc., Johnstown, Ohio.

BOWEY CHOCOLATE

Bowey's Hot Chocolate Powder—A mixture in powder form of chocolate liquor, cane sugar and skim milk flavored with vanilla extract. Manufactured by Bowey's, Inc., Chicago. (Inspired by this acceptance—the first for a hot chocolate powder—the manufacturer will shortly market a 10 cent size package.)

Emulsifier Booklet

Jacques Wolf & Co., Passaic, N. J., has issued a booklet describing the properties and uses of "Aldron," formerly known as Emulsifier No. 5, a new emulsifying agent and protective colloid for use in the manufacture of food products, pharmaceuticals, toilet preparations, and other industrial emulsions and suspensions.

People

Cook—Remington Medalist

Professor E. Fullerton Cook, chairman of the U. S. P. revision committee, has been awarded the Remington Medal for 1931 awarded annually by the New York branch of the American Pharmaceutical Association to the person "who has done most for American pharmacy during the preceding year or during a larger period

E. Fullerton Cook

of outstanding activity and of fruitful achievement." In selecting Professor Cook, the medal committee agreed that as chairman of the U. S. P. X revision committee he "maintained the prestige that has been attached to that internationally famed volume for several decades, and as an exemplar of high ideals in pharmacy has shed luster on the profession for many years, and as chairman of the U. S. P. XI. revision committee is an outstanding figure in American pharmacy today."

Graesser-Monsanto Changes

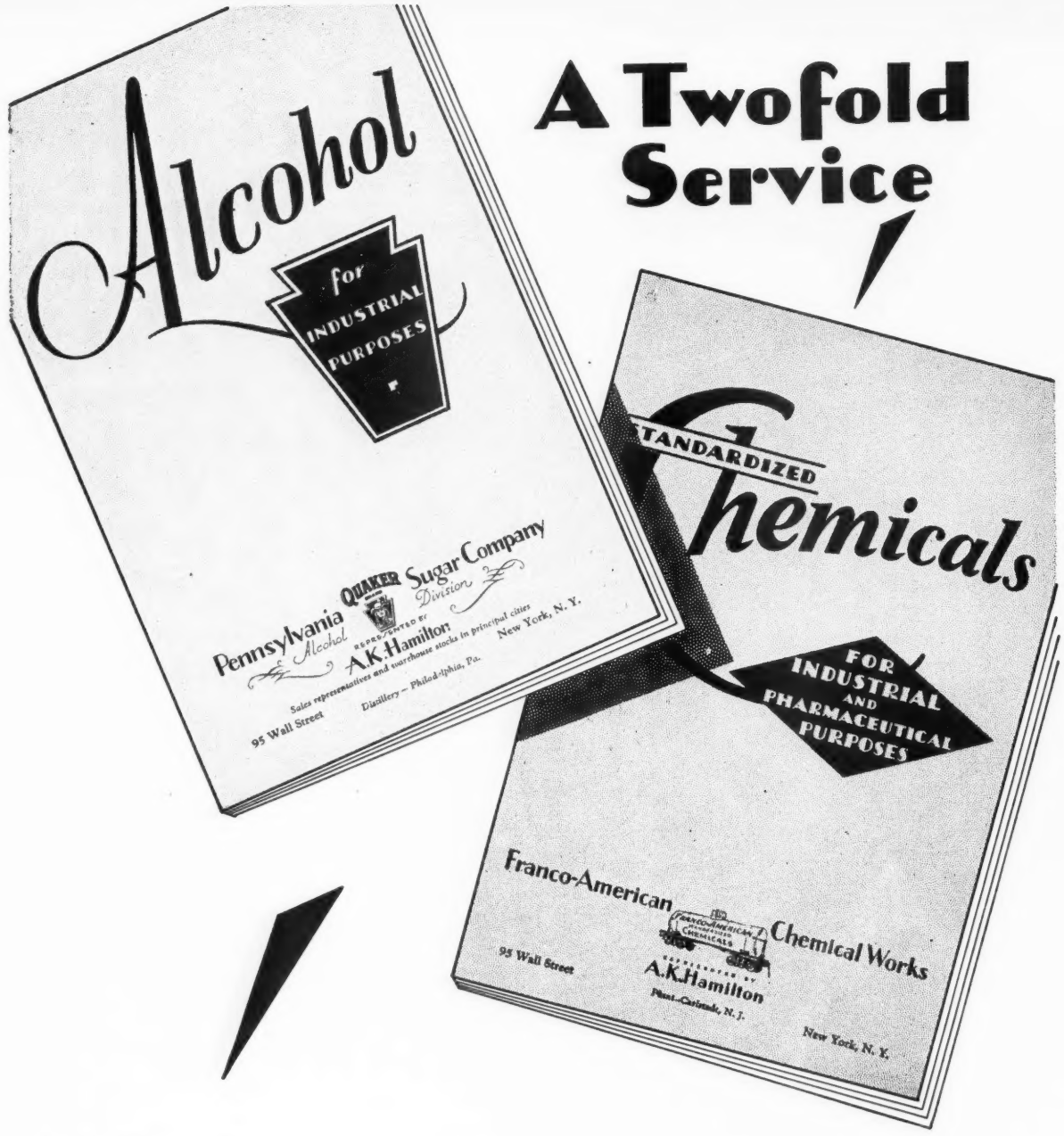
C. O. Bower has resigned as technical director of Graesser-Monsanto, English subsidiary of Monsanto Chemical Works. Ewart M. Mather has been made chief chemist and Dr. W. H. Garrett, works superintendent.

Gill Joins W. J. Bush

Hugh Gill, has become associated with the New York headquarters of W. J. Bush & Co., Inc., as sales manager and assistant to R. Righton Webb, secretary and treasurer of the company.

Johnstone Perfumes

Fitzhugh R. Johnstone, formerly with the Marinello Co. at La Crosse, Wisc., is president and general manager of Perfumes, Inc., Philadelphia, a new company.



The two booklets shown above are valuable to all users of Alcohol and Raw Materials for the Drug, Chemical, and Allied Industries.

Through the sales organization of A. K. Hamilton, The Pennsylvania Sugar Company and the Franco-American Chemical Works are able to offer you a twofold service on your purchases of industrial alcohol and allied chemicals.

These two booklets have been prepared to give you such information as you may need about these products. Either or both booklets will be sent to you on request.

Pennsylvania Sugar Company

Franco - American Chemical Works

SALES OFFICE:

A. K. Hamilton

95 Wall Street **New York, N. Y.**

Sales representatives and warehouse stocks in principal cities

Distillery
Philadelphia, Pa.

Chemical Plant
Carlstadt, N. J.

Wellcome Honored

Henry S. Wellcome, president, Burroughs-Wellcome & Co., London, has been

Henry S. Wellcome

elected honorary president of the American Pharmaceutical Association.

Fifty Years

William H. Ball, treasurer, E. Fougera & Co., Inc., New York, pharmaceuticals, at a meeting of the board of directors was presented by Montaigu M. Sterling, president of the company, with a gold watch suitably inscribed in testimonial for the fiftieth anniversary of his association with the organization.

Bunting's New Home

George A. Bunting, president, Noxzema Chemical Co., Baltimore, proprietary medicines, has purchased a new residence in that city at a reported price of $70,000.

Coty Board Members

A. A. Petitjean and L. R. Marais of Paris, and George Sabran and Serge Hestler of New York, are new members of the board of directors of Coty, Inc.

Friend with Protective Foods

E. A. Friend, formerly with H. K. Mulford & Co., has become director of the scientific department of Protective Foods, Inc., Los Angeles, "Neo-Nutritions," vegetable concentrates in powdered form for therapeutic use.

Frankle with Swann

George Y. Frankle, formerly associated with the Grasselli Chemical Co., has been appointed sales manager, Swann Chemical Co., Birmingham, Ala., succeeding Robert S. Weatherly, who has been made a vice-president. He had been with Grasselli since 1914. In 1925 he was made assistant to the sales manager of the Birmingham territory and since 1927 has been in full charge of sales in that territory.

McK. & R. Personnel

William W. Gibson, former manager, McKesson-Gibson-Snow Co., has been elected president, McKesson-Buffalo Drug Co. Andrew G. Kellner, vice-president of the former company, was given a similar position with the new corporation and Raymond H. Royce was elected secretary and assistant manager.

Geyer Joins United

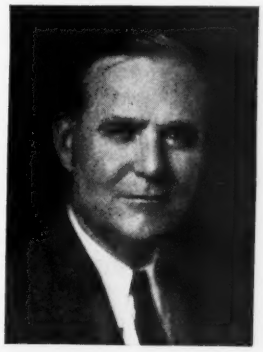
H. R. Geyer, formerly sales manager, Stanley Jordan & Co., New York, importers, has joined the sales force of United Chemical & Drug Corp., that city, where he will have charge of a special department devoted to the handling of Chinese egg products.

Thompson Honored

W. L. Thompson, president, John L. Thompson Sons & Co., Inc., Troy, wholesale druggists, has received the degree of LL.D. from Rensselaer Polytechnic Institute.

Nichols Promoted

John J. Nichols, director of the Iodine Educational Bureau, New York, since its establishment, has been elected president of that institution. He is a graduate pharmacist, and before his connection with the Bureau was employed for a



John J. Nichols

number of years with H. K. Mulford and other pharmaceutical houses, as well as with Strawbridge & Clothier, Philadelphia department store, as a buyer of drugs and toiletries. Since becoming director of the Iodine Educational Bureau, he has been responsible for coordinating much of the research work which has lead to valuable developments in the field of iodine.

Synfleur in Chicago

Arthur Sebren, head of Mortex Laboratories, Chicago, will represent Synfleur Scientific Laboratories, Monticello, N. Y., perfume materials, in Chicago and surrounding territory.

Lyon Buys Mead

Julian W. Lyon New York, essential oil broker, has purchased the business of F. W. Mead & Co., that city, representative of foreign shippers of botanical drugs, medicinal gums, spices, cod liver oil, and East Indian produce. The new acquisition will not be merged with the essential oil business but will be operated separately under its own name.

McKnight with Hillier

J. W. McKnight, formerly with McIlvaine Bros., has joined the sales force of R. Hillier's Son Corp., New York.

Psyllium as Poultice

Jos. J. Yabroudi, New York, pharmacist, sold psyllium seeds and other varieties of the Plantago in Egypt forty-eight years ago to be used in poultices.

Dirr Visits Canada

Peter A. Dirr, vice-president, Chas. L. Huisking & Co., Inc., New York, took his three eldest children on a personally conducted visit to Montreal and Quebec. Since his return, Mr. Dirr speaks very highly of the good spirits and admirable customs of our neighbor to the north.

Weed Goes West

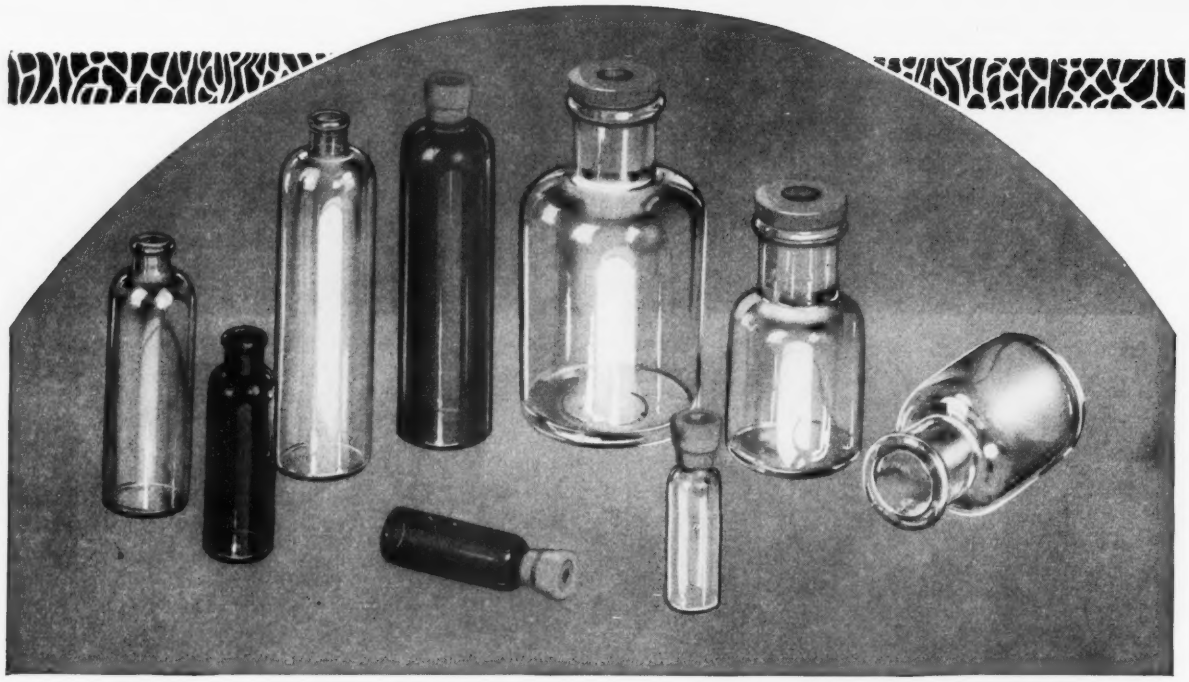
Dr. Alfred Weed, entomologist, John Powell & Co., Inc., New York, is spending his vacation at one of the Wisconsin lakes.

Donaldson on Board

E. Victor Donaldson, president and general manager, Robert Gair Co., New York, paper board products, has been elected to the board of directors of Maritime Paper Products, Ltd., Halifax, N. S. The Gair company has acquired a substantial interest in Maritime and through it plans to extend its activities in Canada.

George Huisking Changes

George P. Huisking, who prior to July 1, 1930 was for twenty years connected with Chas. L. Huisking & Co., Inc., New York, has resumed employment with that company as of August 10. Mr. Huisking left Chas. L. Huisking & Co. last year to become sales manager of Matawan Coal Tar Corp., but that connection did not develop as he anticipated. He then started a commission agency under his own name which has now been discontinued.



SERUM VIALS AND AMPOULES

of Recognized Quality

The visible guarantee — *of invisible quality*

KIMBLE GLASS

IN producing and packaging serums, nothing can be left to chance or guesswork, where quality, purity and accuracy are concerned.

Kimble Serum Vials have been especially designed as safe and satisfactory containers for serums and other pharmaceuticals. Their unusual strength is attained by the almost perfect uniformity of the thicker wall — retempered, of course, to remove hidden defects. They are available either in the standard flint glass or in either flint or amber NC (non-corrosive) glass.

Kimble Ampoules are made of Kimble NC (non-corrosive) glass, both in flint and in amber. They are uniform in capacity, retempered for greater strength, and available in all sizes.

Prices and specifications available on request.

KIMBLE GLASS COMPANY

Principal Office and Plant, Vineland, N. J.

Branch Offices:

New York, 1440 Broadway — Philadelphia, Public Ledger Bldg. — Boston, 131 State St.
Chicago, 402 W. Randolph St. — Detroit, General Motors Bldg.

KIMBLE

EXAX GLASSWARE OF ASSURED ACCURACY NORMAX

Bischoff in Europe

Dr. Ernst Bischoff, president, Ernst Bischoff Co., New York, pharmaceuticals, has left for Europe to be gone until late October.

Kelly Joins Hosken

Charles F. Kelly, formerly sales manager of the Rhodia division of Newport Chemical Works, is now associated with Hosken & Co., New York, importers of quinine salts.

Obituaries

Daubeney Brandreth

Daubeney Brandreth, vice-president, Allcock Manufacturing Co., porous plasters, died at his home in Ossining, N. Y., July 9, aged 57. He was born in England, a son of the late Dr. Henry D. Brandreth and grandson of the late Dr. Benjamin Brandreth, founder of a large proprietary medicine manufacturing business bearing his name.

A. V. Paine

Alfred V. Paine, long connected with the wholesale drug business, died at his home in Louisville, Ky., July 3, aged 82.

F. E. Bogart

Frank E. Bogart, chairman of the board and president, McKesson-Farrand-Williams Co., Detroit, wholesale druggist, and one-time president, National Wholesale Druggists' Association, died in the Henry Ford Hospital, Detroit, July 21, aged 66. He was born in Whitby, Ontario, August 4, 1865 and his connection with the wholesale drug business dates from 1883 when he entered the employ of Barrick & Roller, later Roller & Shoemaker, Philadelphia. After about three years he entered the drug and chemical brokerage business in Detroit. With a reorganization of the old firm of Farrand, Williams & Co. in 1889, he became one of the partners of Farrand, Williams & Clark. In 1902 he was elected vice-president and general manager of the company and when the business was consolidated with the McKesson & Robbins interests in 1928, he became president and chairman of the board. At that time he was also elected a director and vice-president of McKesson & Robbins, Inc., but resigned from the board of that company in April, 1931. He served in various capacities for the National Wholesale Druggists' Association of which organization he was president in 1922-23.

J. W. Clapp

James Wilkinson Clapp, president, Otis Clapp & Son, Inc., Boston, proprietary medicines, died at his home in Brookline, Mass., July 20, aged 83. He was born in Boston and became associated in 1875 with the business which had been founded by his father. He had been president of the company since 1882 and was actively engaged in its management up until the time of his death.

NOTICE

Every subscriber has by this time received his copy of Drug Markets 1931 Catalog and Directory. If, for any reason, you have not received your copy, write to us and we shall be glad to remedy the oversight.

J. H. Bowne

Joseph H. Bowne, for fifty-six years closely identified with the drug and essential oil trades in New York as a merchandiser of peppermint oil, senega root and the citrus oils, died at his home in South Orange, N. J., July 30, aged 75.

C. P. Townsend

Clinton Paul Townsend, research chemist who was associated with Dr. Leo H. H. Baekeland in the development of "Bakelite," and in recent years, chief of the patent department, Union Carbide & Carbon Corp., died at Great Neck, L. I., August 4, aged 63.

C. C. C. Howard

Conrad C. C. Howard, who had been connected with the accounting department of E. R. Squibb & Sons for the past twenty years, died in West Englewood, N. J., August 3.

Retail Outlets

Chain Store Taxes

Alabama was the source of the latest bad news for chain stores through the passage of a measure providing for taxes as follows beginning October 1: 1 store $1; 2 to 5 stores, $10 a store over one; for each additional store up to 10, $15; for each store from 10 to 20, $25; and for each store over 20, $75.

No Sales Manager

One of the first to abolish the position of sales manager is the Louis K. Liggett Co., New York, where sales department managers now report directly to the president. Other executive changes are: H. E. Master, vice-president, has charge of the combined real estate and construction departments; E. L. Meserve has been elected vice-president in charge of inspection of properties; F. L. Tompkins has been elected a vice-president in charge of window displays and signs.

Rent on Volume

Unusual is the lease signed by the Whelan Drug Co. for a store site at Broadway and 95th street, New York. The drug firm will pay a rental based on the percentage of its gross sales each year, instead of a fixed monthly charge.

United—Gillette Settle

United Cigar—Gillette Safety Razor suit and counter-suit have been settled with the payment by Gillette of $1,900,000 and the two companies have resumed business relations. United has been Gillette's largest outlet.

St. Louis Survey

Causes of business failure in retail drug trade; the drug wholesaler's problem of customer selection; merchandising characteristics of packages; and store arrangement and display are the subjects of a study now being made of the St. Louis drug trade by the Bureau of Foreign and Domestic Commerce. Publications of findings on these four subjects is promised before the end of the current year.

Carroll Chain to Buy

Carroll Co., New Haven, toilet goods chain, announces that its officers will be in New York, September 15 and 16, on a buying trip. They will be located at the Hotel Commodore, that city and appointments will be made from 10 A. M. on September 15.

Walgreen in Newark

Walgreen Drug Co., Chicago, will open its first store in Newark, N. J., about September 1.

Price-Cutting Survey

Edward Plaut, president of Lehn & Fink, Inc., and chairman of the committee on retail pricing, New York Board of Trade, has announced that that committee survey will be available before the next session of Congress.

I. D. A. Advances

Independent Druggists' Alliance, Chicago, cooperative retailers, has announced that during July more than 100 items of the new I. D. A. brand merchandise was introduced into more than 100 I. D. A. stores in New Jersey. William H. Wagner, formerly with Walgreen, is general man-

Manufacturers and Importers of Essential Oils, Flower Oils, Aromatic Chemicals, Perfume Materials, Flavors

A Reminder to Manufacturers

Success in making and marketing cosmetics, or any perfumed or flavored preparation, differs but little from success in any similar line. If you are now making proprietary articles, the same general principles apply.

Satisfy the public's taste
Give the best value you can
Merchandise intelligently
Package attractively
Scent or flavor properly
Help dealers move goods
Price your line right

We are prepared to assist manufacturers with counsel and advice. Years of contact have given us an appreciation of the public's tastes and a knowledge of the market for many types of preparations.

As manufacturers of perfume materials and flavors, we are in a position to be of direct and positive help in that field.

Inquiries Invited

van Ameringen-Haebler, Inc.

Manufacturers and Importers of

Aromatic Essentials

315 FOURTH AVENUE, NEW YORK

180 North Wacker Drive, Chicago 619 Clark Avenue, St. Louis 42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

ager and directs I. D. A. merchandising from administrative headquarters in Newark, N. J.

Advertising

July Advertising Less

Drugs and toiletries magazine advertising expenditures of $2,703,228 in July, 1931 showed a decrease of 0.7 per cent. from the July, 1930 total of $2,722,821. Of this July expenditure $2,657,870 was spent in national magazines, compared with $2,681,392 in July of 1930, a decrease of 0.9 per cent. In national farm magazines, the industry spent $45,358 in July of this year compared with $41,429 for the same month last year, an increase of 9.5 per cent.

For the first six months of 1931, the total of magazine advertising was $21,522,256, a decline of 2.1 per cent. from the similar total of $21,986,022 for 1930. For the seven months' period, the advertising expenditure in national magazines totaled $21,148,864 in 1931 compared with $21,620,450 for 1930, a decline of 2.2 per cent., and the similar expenditure in farm magazines was $373,392 for 1931 compared with $365,572 for 1930, a gain of 2.1 per cent.

Of the total July, 1931 expenditure for national magazine advertising, $2,022,029 was spent in advertising beauty preparations and toilet goods and $635,841 in advertising medical and proprietary goods.

The expenditure by manufacturers of drugs and toiletries during June, 1931 for radio broadcast advertising over national networks totaled $451,804, a gain of 84 per cent. over the total of $245,735 spent in June, 1930, according to Dorrance, Sullivan & Co., Inc., New York advertising agents. During the first six months of 1931, the industry spent a total of $2,729,075 for radio advertising, compared with $1,459,023 during the same six months of 1930, an increase of 37 per cent., large enough to offset the corresponding slight decline in magazine advertising. The total for all national advertising during these six months of 1931 was $21,548,103, a gain of 4.0 per cent. over the total of $20,722,224 similarly spent during the same months in 1930.

Standard Drug Campaign

Standard Drug Co., Jacksonville, "Livro," treatment for colds, malaria, headache, is reported planning an extensive advertising campaign and also expansion to include manufacture of other proprietaries and toiletries.

Anotok

Anti-Auto-Tox Co., Inc., New York, has changed the name of its product to "Anotok".

On the Air

PEPSODENT

Pepsodent Co., Chicago, tooth paste, "The Trials of the Goldbergs", NBC network, 7-45 P. M. daily except Sunday and Tuesday.

MARLY PERFUME

Marly Perfume, Inc., New York, "Marly's Personality Perfumes Hour", NBC network, 10-45 A. M. Wednesday.

KOLYNOS SALES

Kolynos Sales Co., Inc., Chicago, toothpaste, "Kolynos Program", CBS network, 6:30 P. M.

IN-NO-SENT

Dr. A. Mirenta Laboratories, Tacoma, has started radio advertising on the West Coast, in behalf of "In-no-sent", a body deodorant.

BORIC ACID

Pacific Coast Borax Co., New York, is now devoting a portion of its half-weekly broadcasting program to exploiting "20 Mule Team" boric acid. Previously the entire program had been given over to "20 Mule Team" borax.

Trade Names Out

Commercial trade names disappeared on July 22 from radio programs published in New York City newspapers. New listings make no mention of advertisers and their products, but describe the nature of the program and give the entertainers' names. Many programs featuring drugs and toiletries (this group spent $2,729,075 for radio advertising in the first half of 1931) were affected by the change in policy.

Colgate Slip-sheets

Drug store newsstands helped advertise Colgate's 125th anniversary by slip-sheeting posters into the newspapers they sold. These posters carried the offer of a 25 cent tube of dental cream with the purchase of any one of six Colgate-Palmolive products.

McCormick Contest

McCormick & Co., Baltimore, insecticides, is conducting a nationwide contest open to the general public, offering $500 in cash prizes for the best answers to three questions concerning the company's "Bee Brand Insect Powder".

Pollock with Superior

John J. Pollock, formerly with Tre-Jur, Inc., New York, has become sales manager, Superior Products Corp., that city.

New Drug Agency

Mortimer Lowell Co., advertising agency, has been formed in New York to specialize in drug products, including proprietary medicines, and cosmetics.

Account Changes

Lavoris Chemical Co., Minneapolis, to Blackett-Sample-Hummert, Inc., Chicago.

Kwik Co., Suffern, N. Y., nail preparations, to Churchill-Hall, Inc., New York.

Lehn & Fink, Inc., New York, "Hinds Honey and Almond Cream", to Erwin, Wasey & Co., there.

Simonson Corp., New York, cosmetics, to Chas. A. Weeks & Co., Inc., there.

Majestic Chemical Co., Los Angeles, insecticides, to Advertisers Co., there.

Marly Perfume, Inc., New York, to William G. Seidenbaum Advertising Agency, there.

Wagner Glass Works, New York, chemical glassware, to Morris & Jones, Inc., there.

Varady-Vienna, Cleveland, cosmetics, to Gerstenberger Advertising, Inc., there.

Golden Peacock, Inc., Paris, Tenn., cosmetics, to Sehl Advertising Agency, Chicago.

Hess Witch Hazel Co., Brook, Ind., to ditto.

Scott & Bowne, Inc., Elmira, N. Y., "Scott's Emulsion", to N. W. Ayer & Son, New York.

Mary Garden Sues Rigaud

Parfumerie Rigaud, Inc., New York, has filed an answer to the $100,000 suit brought against it by Mary Garden, internationally known opera singer, who charged that the company had no authorization to use her name on its "Parfum Mary Garden". The company's reply states that in a letter written in 1910 to Dr. F. S. Mason, American representative of the company, Miss Garden is alleged to have written, "I am pleased to give you herewith permission to use my name and portrait in connection with the perfume you have originated known as "Parfum Mary Garden ".

No More Prescriptions

Bloomingdale's, New York department store, has discontinued its century-old drug prescription department, while retaining its packaged drug and toilet goods department which last year did a $800,000 volume business.

Sylolax Promotion

Dr. R. H. Kline Co., Red Bank, N. J., is introducing its new product, "Sylolax", in New Jersey through newspapers, store demonstrations and sampling.

CRYSALBA

THE NEW DENTIFRICE BASE

Has been adopted by leading Tooth Paste producers

GENTLE cleaning power, adaptability to acid and alkaline pastes, ability to lower the glycerine bill—all play a part in its growing popularity

As glycerine prices go back to normal, these producers will save more and more through the low absorption of Crysalba. And the effectiveness of Crysalba-based pastes will widen markets, increase volume steadily.

A generous sample will be sent on request, to permit your laboratory and production men to make their own tests, in which Swann Research will gladly cooperate.

Study these points of superiority:

1. Will not harden in tube
2. Equally satisfactory in both acid and alkaline tooth pastes
3. Tasteless, odorless—insoluble in ingredients commonly used in tooth paste manufacture
4. Low absorption of elixir
5. Uniformly white; uniform in purity; crystalline structure and absorption
6. Softer than the enamel of the teeth, yet highly effective as a polishing agent
7. About 99% will pass thru a 400-mesh screen
8. Inert, neutral and physiologically harmless
9. Contains no free lime
10. Free from arsenic, lead or other poisonous metals or their salts

THE ILIFF-BRUFF CHEMICAL COMPANY

Hoopeston, Illinois **DENTIFRICE DIVISION**

SWANN TCP Of uniform polishing power, which can be varied to your needs. Constant, uniform purity. Gives a creamy white paste of high effectiveness in acid or alkaline formulae.

PYRAN Patented. Designed to remove mucin placque without injury to enamel, dentin or gingival margins. Helps create proper mouth conditions. Equally useful in acid or alkaline pastes.

THE SWANN CORPORATION

BIRMINGHAM

NEW YORK ST LOUIS

CINCINNATI

WORLD'S LARGEST DENTIFRICE BASE PRODUCERS

Pharmacy Laws

MILK OF MAGNESIA NOT PROPRIETARY

Milk of magnesia is not a proprietary medicine and its sale by a general store where no registered pharmacist is employed is prohibited by the Pharmacy law of the State of Minnesota, according to a decision of the Supreme Court of that state in the case of the State v. the F. W. Woolworth Co.

The court held that the milk of magnesia in question was not a proprietary medicine; that where a preparation is a medicine prepared, sold and used solely or principally as a medicine, and is not a patent or proprietary medicine, then its sale comes within the law and is restricted to sales by or under the supervision of a licensed pharmacist; and that the fact that it is a harmless or household medicine does not except it from the law.

MONTANA AND OREGON

Montana and Oregon further clarified state pharmacy laws through decisions of their attorney generals who ruled that patent medicines in the manufacturer's original package, if plainly labeled, may be sold in any general merchandise store without the owner securing a druggist's license. In Oregon, however, it was further ruled that the words "drug sundries" on the exterior of such stores where no registered pharmacist is employed was in violation of the law.

In Oregon, it was also held that provisions making it unlawful for anyone except a registered pharmacist or assistant pharmacist to manufacture, dispense or sell any drug . . . are not applicable to the wholesale manufacture of drugs within the state.

Walgreen Agencies

Walgreen Co., Chicago, has organized Walgreen Agency Co. to establish exclusive drug store agencies for Walgreen products in communities of less than 5,000 inhabitants. Selected druggists are chosen in communities lacking Walgreen stores; a franchise is granted the dealer based upon his volume of business; the dealer agrees not to feature any line of agency merchandise similar to the Walgreen products; the dealer is paid a commission on his sales and supplied with sales promotion helps.

Most of the Walgreen merchandise is manufactured in the company's Chicago laboratories. Although forty or fifty items make up the line distributed by Walgreen, all do not bear the Walgreen name, although presumably they are made by Walgreen or under Walgreen supervision.

D. S. C. Deals

Druggists Supply Corp., New York, cooperative wholesalers organization, is handling the distribution of two combination deals, one involving "Princess Pat" cleansing cream and "Kleenex," and the other "Conti" castile soap and "Pro-phy-lac-tic" hair brushes.

Regulatory

Multiple Seizures Appeal

As expected, the Department of Agriculture has recommended to the Department of Justice that an appeal be taken to the Supreme Court of the United States in the so-called "multiple seizure case" involving the powers of the Federal Food and Drug Administration in making repeated seizures of products held by it to be in violation of the Food and Drugs Act. This case, an action brought by the National Remedy Co. to enjoin seizures of its "B. & M. External Remedy" was decided in favor of the company in the Court of Appeals, District of Columbia, where it was held that the Administration was without definite authority to make multiple seizures, in cases of misbranding, while determination of the status of a label was pending in the courts.

The legal aspect of the case, as it seems to legal-minded Administrator W. G. Campbell is that, "Since the company involved has changed the label on its product, the case might be considered moot if tried on its merits, and inasmuch as the government wishes a final determination of the question of jurisdiction of equity courts in such cases, an appeal was recommended.

"If the authority of equity courts to enjoin seizures by the department should be upheld, this would not affect materially the power of the Food and Drug Administration to make multiple seizures, but it would open the way to duplicate litigation on the merits of each case, first in a court of equity in an injunction proceeding, and afterward in a court of law on the actual seizure.

"The necessity of trying the case on the merits in a court of equity, under the decision of the appellate court, would arise from the necessity of the equity court determining whether the case was such as to warrant its action, involving presentation of the facts and consideration of them. Afterward a court of law would render final decision on the legality of each seizure involved."

Durrett Talks to Pharmacists

Pertinent statements made by Dr. J. J. Durrett of the Food and Drug Administration addressing the American Pharmaceutical Association, July 31, in Miami, Fla., were:

(1) Drugs such as ether and preparations of ether and digitalis, which are likely to deteriorate after manufacture, should be given a larger range in potency requirements when such extension does not endanger public health. Such a privilege is necessary to the manufacturer to make such products effective for a longer period of time. A 130 per cent. fluidextract of ergot is not deleterious and should be permitted.

(2) As the courts recently denied the right of the administration to make multiple seizures before the trial of an issue in court, a review of this decision will be sought and such issues tried if no other means offers.

(3) Complicating decisions have been rendered by the courts concerning the accepted value of the components of a medicine (Lee's Save the Baby case). The administration will appeal unfavorable decisions in such cases.

(4) The administration will defend the Pharmacopoeia and National Formulary as legal standards.

Ether Quality Improves

Examination of anesthetic ether used by Canadian hospitals revealed that out of 257 samples taken, only 8 per cent. were inferior, as compared with 25 per cent. in 1927-28, and 65 per cent. in 1925-26. All the larger hospitals in Canada were visited. Two leading brands constituted 93 per cent. of the samples, and, of these, 8 packages were found to be inferior. Of the remaining 19 samples, representing seven lesser-known brands.

F. T. C. Defeated

Health Laboratories, Inc., Pittsburgh, "Acidine", charged the Federal Trade Commission with hindering, annoying and embarassing it in the conduct of its business and succeeded in having compalint against it dismissed. The company also charged that the Commission was attempting to usurp the powers delegated by Congress to the Food and Drug Administration, since all representations made by the company for "Acidine" had been changed before the Commission's complain was issued, to meet the approval of the Food and Drug Administration.

Codeine Control

Codeine is for the first time brought under international control by an agreement reached by the Conference on the Limitation of Narcotics, concluded last month at Geneva, Switzerland.

Foreign Drugs in Germany

Medicinal products and cosmetics are among the products which will be affected by the order of the German government refusing foreign exchange for the financing of importations of foreign goods. The German order stopping imports, permits financing of raw materials, and some inter-

POWCO
LABORATORY CONTROLLED
BRAND
REG. U.S. PAT. OFF

Neutral Powdered Soaps
For dentifrices and other toilet preparations

Concentrated Shaving Cream Base
Removes the uncertainty from shaving cream manufacture

Persian Quince Seed
Tested for mucilaginous content and color

JOHN POWELL & CO., INC.
114 E. 32nd St. New York, N. Y.

CAMPHOR SYNTHETIC
Chemically identical with
natural camphor

MENTHOL SYNTHETIC
Fine natural odor--white crystals. For lower costs in mentholating mouth washes, tooth pastes, shaving creams, etc.

Thymol U. S. P.
Pure White Crystals

Terpin Hydrate
U. S. P. Powdered and Crystals

Terpineol C. P.

Urea C. P.

Urethane U. S. P.

Products of
Schering-Kahlbaum A. G.
Berlin

SCHERING CORPORATION 110 William Street New York, N. Y.
Sole Import and Sales Agents in the U. S. A. for the Manufacturers.
Stock Carried at New York

mediate materials, but no exchange whatsoever will be available for the importation of finished manufactured products.

Perfume Paper Duty

Fancy paper boxes, imported as the immediate coverings of empty bottles, designed to be used as containers of perfume, which are of greater value than the bottles and are to be used after importation as coverings of the filled bottles of perfume, are dutiable with the said bottles at the rate applicable to the latter, according to a ruling of the Bureau of Customs.

Kotab Infringes Kotex

In case of Kotex Co. vs. Kotabs, Inc., Circuit Court of Appeals, Philadelphia, held the trade mark, "Kotex" to be infringed and the Kotex Co. to be the victim of unfair competition on the part of Kotabs, Inc., for thus naming tablets for relieving menstrual and other pains.

Financial

Drug Stocks Higher

Prices of common stocks of drug and cosmetic companies, after declining one week and advancing the next all through July, ended the month 2.3 per cent. higher than in the first week, according to the stock price index of Standard Statistics Co., New York. This is a better showing than was made by the stocks of 337 miscellaneous industries, which dropped 3.8 points in the same period. Detailed figures covering both indexes are given below:

1926 Average equals 100

	Drugs and Cosmetics	*337 Industrials*
July 8	119.6	90.4
15	117.5	86.9
22	121.0	90.2
29	119.4	87.0
Aug. 5	121.9	86.6
1931 High	133.8	114.7
Low	114.0	82.0
1930 High	174.7	174.1
Low	115.8	98.2

Earnings

ABBOTT STEADY

Abbott Laboratories, Inc., Chicago, has reported for six months ended June 30, a net income of $261,262 exclusive of Canadian subsidiaries' earnings and after charges and Federal taxes. This was equal to $1.80 per share on 145,000 capital shares. In the similar period of last year the combined net earnings of the company and Swan-Myers was $265,718, or $1.83 per share on the same number of shares.

AMER. COMM. ALCOHOL LOSES

American Commercial Alcohol Corp. reported a net loss of $42,941 for the six months ended June 30 after charges and taxes. This compared with a net profit of $175,931, or 45 cents per share on 389,494 shares, in the first half of last year. In the June quarter, the net loss was $167, 779 after charges and taxes. This compared with a net profit of $124,837, or 33 cents per share, in the preceding quarter, and with a net profit of $581 in the June quarter last year.

AMER. SOLVENTS LOSES

American Solvents & Chemical Corp. and subsidiaries reported a consolidated net loss of $497,953 for the six months ended June 30 after charges. This compared with a net loss of $188,603 for the corresponding period of last year.

ANCHOR CAP OFF

Anchor Cap Corp. reports for six months ended June 30: Net profit after depreciation, Federal taxes and other charges, $447,448, equal after preferred dividends to $1.49 a share on the common stock, compared with $575,135, or $2.04 a share, last year.

COLGATE STEADY

Colgate-Palmolive-Peet Co. reports for six months ended June 30: Net income, $4,003,694, equal, after preferred dividends and all charges, to $1.69 a share on common stock against $3,760,625 or $1.66 a share last year.

COMM. SOLVENTS IMPROVES

Commercial Solvents Corp. reports for three months ended June 30: Net profit after depreciation, Federal taxes and reserves, $644,799, equal to 25 cents a share on common stock, compared with $537,544 or 21 cents in previous quarter, and $747,025 or 39 cents in second quarter last year: Six months: Net profit, $1,182,343 or 46 cents a share, compared with $1,497,517 or 60 cents a share last year.

CONTAINER LOSES LESS

Container Corporation of America reports for three months ended June 30: Net loss after interest, depreciation and other charges, $44,083, compared with a net loss of $124,518 in the preceding quarter and contrasted with a net profit of $180,796, equal after preferred dividends to 6 cents a share on the Class B stock in the second quarter last year. Six months: Net loss, $168,601, contrasted with a net profit of $316,183, or 4 cents a share on the Class B stock, last year.

CROWN CORK UP

Crown Cork & Seal Co., Inc., reports for six months ended June 30: Net profit after depreciation, amortization, Federal taxes, minority interest and other charges $570,510, equal after preferred dividends to $1.18 a share on the average number of common shares outstanding during the period and 97 cents on the number outstanding at the end of June, compared with $837,584, or $2.34 a share, last year.

LAMBERT DOWN

Lambert Co. reports for the six months ended June 30, 1931, consolidated net profits, after taxes, amounting to $3,572, 529, equivalent to $4.77 a share on the company's 748,996 shares of outstanding capital stock. Consolidated net profits for the first six months in 1930 were $3,764, 349, or $5.02 a share on a like number of shares.

LEHN & FINK LESS

Lehn & Fink Products Co. has reported for six months ended June 30, 1931, net profits of $777,300 equivalent to $1.85 per share, as compared with $918,383, or $2.19 per share in first half of 1930.

MONSANTO UP

Monsanto Chemical Works net profit for the six months ended June 30 was approximately $671,300, or $1.56 a share on 429,000 shares, against $622,397, or $1.51 a share, on 410,307 shares in the like period in 1930. An even better report is promised for the second half.

Any company which succeeded in earning more during the first six months of the present year than was earned in the corresponding period of 1930 is worthy of at least passing notice, but when the common stock of the same company can register a new high for the year during the week of the disappointing "Steel" report it becomes the striking exception to the general rule says, "The Magazine of Wall St." For the six months ended June 30, 1931 Monsanto Chemical Works earned an amount equivalent to $1.56 per common share as against $1.52 for the same period in 1930. The company's business has not been hit unnaturally by the current general depression, but this was more than offset by internal economies and the excellent reception given to several new products which were manufactured in this country for the first time. Selling around $28 a share and earning an excellent margin over regular dividend requirements of $1.25 the common stock of this company appears to be a not unreasonably priced speculation at the present time.

NAT. DISTILLERS IMPROVE

National Distillers Products Corp. reported a consolidated net profit of $381,137 for the six months ended June 30, after interest, depreciation and preferred dividends on the American Medicinal Spirits Company but before Federal taxes. This compared with a net profit of $243,921 for the first half of last year.

PEOPLE'S DRUG TIP

People's Drug Stores, Inc., Chicago, reported net income of $247,041 for six months ended June 30, equal to $1.37 a share on 123,052 common shares, compared with $231,478, or $1.17 a share in the first half of last year.

ART
TUBE
COMPANY

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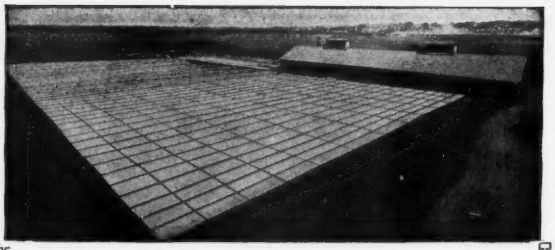

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PROCTOR & GAMBLE STEADY

Proctor & Gamble Co. reports for year ended June 30: Net profit after depreciation, interest, Federal taxes and other charges, $22,650,818, equal, after preferred dividends, to $3.37 a share on the common stock, compared with $22,450,600, including $240,282 credit adjustment of prior year's tax reserves, or $3.37 a share on the common stock in preceding fiscal year. Sales were $190,523,237, against $203,365,610, the decrease being explained in a statement to stockholders as being due to lower prices, as tonnage sales were larger in the year just ended than in the preceding year.

SHARP & DOHME DOWN

Sharp & Dohme, Inc., report for six months ended June 30 showed net profit of $554,835 after charges, depreciation and Federal taxes. This was equal to 20 cents per common share and compared with $614,326, or 27 cents per share for the first half of 1930. The net for the second quarter totaled $278,417, or 10 cents per common share after preferred dividends, and compared with $276,418, or 10 cents per common share in the preceding quarter and with $341, 316, or 18 cents per common share in the second quarter of 1930.

UNION CARBIDE STEADY

Union Carbide and Carbon Corp. reports for three months ended June 30: Net earnings after interest, dividends on preferred stock of subsidiary companies, depreciation, Federal taxes and other charges, $4,506,155, equal to 50 cents a share on the outstanding stock, compared with $4,613,671, or 51 cents a share, in the preceding quarter and $6,306,803, or 70 cents a share, in the second quarter of 1930.

U. S. ALCOHOL LOSES

United States Industrial Alcohol Co. reports for six months ended June 30: Net loss after depreciation and other charges, $527,286, against a net profit of $552,485, equal to $1.48 a share last year.

VICK CLIMBS

Vick Financial Corp., an investment trust affiliated with Vick Chemical Corp. has reported a net asset value of $7.58 per common share as of June 30, which compared with a net asset value of $7.38 per common share as of December 31, 1930. Net income from operations in the six months covered in the semi-annual report dated June 30 was $190,796 against dividends of $233,320. The net income for the period was on an annual basis of 32.8 cents per common share compared with dividends paid since August 15, 1930, of 40 cents per share. Directors reduced the quarterly dividends from 10 cents to 7½ cents per common share, payable August 15 to stock of record August 5.

ZONITE STEADY

Zonite Products Corp. reported for six months ended June 30, net income of $549,283, or 65 cents per share, compared with $459,515 or 65 cents per share on a lesser number of shares for the corresponding period of last year. The net income for the second quarter totaled $215,777, after charges and taxes, and was equal to 25 cents a share on the outstanding stock, comapred with $214,841, or 30 cents per share in the same quarter of 1929.

New Companies

Speed Factors, Brooklyn, N. Y., cosmetics—P. Kirschner, 16 Court St., Brooklyn, 200 shares common.

Voolay Perfumery Corp., Wilmington, Del., perfumeries, powders, toilet waters—Corporation Trust Co., 1,000 shares common.

Individual Cosmetics Corp., New York City—Armstrong, Keith & Kern, 67 Wall St., 500 shares common.

Hygeia Products, New York City, toilet articles—G. H. Burtis, 189 Montague St., Brooklyn, N. Y., $50,000.

Oralee Freres, New York City, perfumes—E. Weiss, 19 W. 44th St., $10,000.

Bali, New York City, cosmetics—Weil & Fenster, 291 Broadway, $20,000.

Service Products, New York City, cosmetics—I. Hagler, 125 Rivington St., $1,000.

Florence Cole, New York City, cosmetics—H. H. Benjamin, 350 Fifth Ave., $20,000.

Recamier Manufacturing Co., New York City, perfumes—I. Reiss, 220 Broadway, 100 shares common.

Peggy Worth, Inc., New York City, creams, lotions, powders, soaps, —United States Corporation Co., $100,000; 3,000 shares common.

Nektol Corporation, New York City, disinfectants—Attorneys, Albany Service Co., 299 Broadway, $10,000.

Empire State Medical Co., New York City, chemicals—Attorneys, Albany Service Co., 299 Broadway, 200 shares common.

Aceon Medical Gases, New York City, chemicals—D. D. Farr, Jackson Heights, N. Y., $50,000 pf. 3,500 shares common.

Henry von Frieling Corp., New York City, ointments—C. L. Gonnet, 19 Rector St., 200 shares common.

Professional Products Corporation, New Brunswick, N. J., pharmaceutical and medicinal preparations, R. E. & A. D. Watson, New Brunswick, $25,000.

The Malva Medicine Co., Wilmington, Del., Malva, other medicines—Corporation Service Co., 25,000 shares common.

Parks Martin Laboratories, Inc., Newark, N. J., medicines, etc.—Frank I. A. Kent, Newark, $125,000.

Sanz Corporation, Wilmington, Del., deodorants—Delaware Registration Trust Co., 3,000 shares common.

The Kerma Products Corp., Wilmington, Del., drugs, medicines, chemicals—Corporation Service Co., $500,000.

Lotus Pharmacal Co., New York City, medicines, drugs—Ruttenberg & Ruttenberg, 1,775 Broadway, $18,000 pf., 180 shares common.

Gilbert Cosmetic Stores, New York City, —H. Schantz, 345 Madison Ave., 200 shares common.

Salud Corporation, New York City, drugs, medicines—Albany Service Co., 299 Broadway, 2,000 shares common.

Salesmen Golf

New names and new faces appeared at the second of the season's golf tournaments of the Salesmen's Association at Lenox Hills, Farmingdale, L. I., July 22 with the following results: Low gross—G. A. Beauchamp, Merck & Co., 86; S. C. Benjamin, 87; "Bud" Alvarez, Grasselli Chemical Co., 92; George Uhe, 95. Low Net for Guests—W. Nevins, Noil Color & Chemical Co., 69; Joseph Huisking, Charles L. Huisking & Co., Inc., 75; E. S. Burke, Jr., Edward S. Burke Co., 78. Low Net for Members—Joseph Wrench, Industrial Chemical Sales Co., 72; Ira MacNair, MacNair-Dorland Co., 79; Williams Haynes, "Chemical Markets," 79; A. J. Higgins, Zinsser & Co., 81. Kickers' handicap—E. S. Burke; Grant Dorland, MacNair-Dorland Co.; G. A. Furman, Merck & Co.

Drug Imports

Imports of crude drugs into the United States have increased 140 per cent. in the 10-year period from 1921 to 1930. In 1921 there were imported 68,215,000 pounds of crude drugs valued at $5,386,000 and in 1930, 165,176,000 pounds valued at $8,765,000, according to the Department of Commerce. The large 1930 gain is attributable to increased imports of licorice root, used in tobacco manufacture. Cinchona bark, used in quinine manufacture, is by far the most important, however. Detailed figures, in thousands of pounds are:

Item	*1927*	*1928*	*1929*	*1930*
Cinchona bark	1,936	1,544	1,960	1,939
Licorice root	69,952	68,633	72,558	127,611
Pyrethrum flowers	8,993	13,689	9,013	8,536
Senna	2,558	2,939	2,899	2,343
Nux vomica	2,307	2,659	3,259	2,198
Aloes	1,316	961	1,230	1,005
Ergot	230	299	228	291
Papaw or crude papain	63	122	132	77
Orris or iris	553	505	700	181
Buchu leaves	87	110	138	92
Gentian	497	681	595	477
Digitalis	61	64	70	64
Belladonna	241	319	171	107
Chamomile flowers	290	135	440	165
Quassia	919	1,990	2,297	829
Fenugreek seed	880	1,089	1,108	557
Ginseng	2	10	18	30
Ipecac	88	59	69	46
Betel or areca nuts	143	136	175	404
Sarsparilla root	315	108	108	141
Stramonium	249	456	216	413
All other	15,293	16,946	17,550	16,670
Total	106,973	113,454	114,934	165,176

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Patents

UNITED STATES PATENTS

Making Ephredine

The starting material is a di-ketone of formula: (RC:O).(O:CR'), R representing a benenoid radicle, R' being H-$(CH_2)_x$, in which x is any desired integer including zero. This ketone is condensed with a primary amine of general formula: H_2N-R", in which R" is an organic radicle containing a carbon atom by which it is linked to the nitrogen atom. The product obtained by condensation is hydrogenated. Richard H. F. Manske, New Haven, Conn. assignor, Eli Lilly & Co., Indianapolis. U. S. P. No. 1,799,110, filed July 21, 1928.

Halogenated Sulphone Phthaleins

These new products are characterized by the fact that the halogens are present in the sulphi-benzoic acid nucleus. Wilton C. Harden, Baltimore, assignor, Hynson, Westcott & Dunning, Inc., Baltimore. U. S. P. No. 1,786,611, filed April 4, 1928.

Pectin Solution from Apple Pomade

Process of manufacture of pectin solution from apple pomade consists in subjecting pomade to high pressure to remove any remainder of palatable juice. Then pomade is broken up and not more than 10% by weight of hot water is added. Mixture is subjected to much higher pressure to express the pectin. Elton R. Darling, Decatur, Ill., and Howard F. MacMillin, Mount Gilead, Ohio, assignors, Hydraulic Press Manufacturing Co., Mount Gilead, O. U. S. P. No. 1,799,140, filed September 6, 1927.

Isoalkylene Phenols

Method of making 3-methyl-6-isopropylene-phenol consists in heating 4:4'-dimethyl-2:2'-dihydroxy-di-phenyldimethyl-menthane in excess of melting point and separating decomposition products by fractional distillation. Walter Schoeller, Berlin-Charlottenberg, Hans Jordan, Berlin-Steglitz and Reinhard Clerc, Berlin, Germany, assignors, Schering-Kahlbaum A. G., Berlin. U. S. P. No. 1,798,813, filed June 22, 1928.

Dialkylbarbituric Acid Drugs

Process for synthetic pharmaceuticals which are compounds of dialkyl-barbituric acid and alpha-phenyl-2:3-dimethyl-4-dimethylamino-5-pyrazolone. Thus a compound is made by reacting the latter with isopropyl-allyl-barbituric acid, using molecular proportions of two substances in common solvent. Resulting product separates out, and crystals are removed from solvent before any excess of constituents has a chance to separate. Ernst Preiswerk, Basel, Switzerland, assignor, Hoffman-La Roche, Inc., Nutley, N. J. U. S. P. No. 1,798,556, filed July 10, 1925.

Soporifics from Amidopyrine

These are solid products made by solidifying molten mixture of alpha-phenyl-2:3-dimethyl-4-dimethylamino-5-pyrazolone and CC-substituted barbituric acid. Reaction is conducted out of contact with reacting gases. Product is practically colorless. Georg Frerichs, Bonn, Germany, assignor, Schrieng-Kahlbaum A. G., Berlin, Germany. U. S. P. No. 1,798,374, filed July 8, 1926.

Monocyclic Lactones—Synthetic Drugs

These new pharmaceuticals are made by heating monocyclic ketones, with from 13 to 17 ring members, with persulphuric acid. Products obtained are monocyclic lactones with 14 to 18 ring members. Leopold Ruzicka, De Bilt, near Utrecht, Netherlands, assignor, Societe Anonyme M. Naef & Co., Geneva, Switzerland. U. S. P. No. 1,799,536, filed July 16, 1928.

Esters Used as Perfume Ingredients

Various esters of lower members of fatty acid series, such as ethyl propionate, butyl butyrate, amyl propionate and the like, including many which find use in perfume compositions, are made by a new process consisting of making mixtures of fatty acids and alcohols to react with one another at 100° to 180° C. which correspond to working pressure of 2 to 10 atmospheres in presence of catalysts capable of producing moderate hydrogen-ion concentration. Esters formed are continuously removed from reaction mixture. Otto Fuchs, Konstanz, Germany, assignor, Deutsche Gold und Silber-Scheideanstalt vormals Roessler, Frankfort-on-the-Main, Germany. U. S. P. No. 1,791,238, filed July 23, 1928.

Making Menthol and Isomers

Process of manufacturing isoalkyl hexahydrocyclohexanols (menthol and its derivatives) consists in acting with hydrogen under pressure and in presence of catalyst on an ether-like product of condensation. Latter substance is prepared from an alkyl phenol and a ketone, this reaction taking place with gaseous hydrochloric acid at 20° to 100° C. Main reaction is carried out at 180° to 320° C. and continues until 16 hydrogen atoms have entered into combination. Hans Jordan, Berlin-Steglitz, Walter Schoeller, Berlin-Westend and Reinhard Clerc, Berlin, Germany, assignors, Schering-Kahlbaum A. G., Berlin, Germany. U. S. P. No. 1,802,055, filed August 15, 1927.

Organic Mercury Therapeutic Compound

This compound is manufactured by causing 1-phenyl-2:3-dimethyl-4-sulphamino-5-pyrazolone to react with mercuric oxide at below 50° C. in presence of sulphuric acid. Mercuric oxide takes part in reaction in form of mercuric sulphate. Emil Scheitlin, Basel, Switzerland. U.S.P. No. 1,802,036, filed November 19, 1928.

Phenyl Ethyl Ethers

These ethers can be made by causing ethyl chloride to react with an aklali metal phenate at 50° to 150° C. in water solution. Edgar C. Britton and Harold R. Slagh, Midland, Mich., assignors, Dow Chemical Co., Midland, Mich. U. S. P. No. 1,801,901, filed August 26, 1927.

Manufacture of Chloroform

Improvement in process of manufacturing chloroform consists in causing trichloro-acetic acid to react with calcium hydroxide in aqueous medium. Solution or suspension obtained is heated to point of decomposition of calcium salt. Charles J. Strosacker, Midland, Mich., assignor, Dow Chemical Co., Midland, Mich. U. S. P. No. 1,801,887, filed December 9, 1924.

Alkaline Bismuth Tartrate Solution

Patent is concerned with preparation of aqueous hypertonic sugar solution containing an alkali metal bismuth tartrate. Solution obtained is compatible with blood and sufficiently stable to permit absorption and general distribution in body before any substantial alteration of same takes place. Philip A. Kober, Evanston, O., assignor, G. D. Searle & Co., Chicago, Ill. U. S. P. No. 1,801,433, filed May 1, 1928.

Separating Secondary Alcohols from Pine Oil

Method of separating secondary alcohols from pine oil consists in treating pine oil to effect conversion of tertiary alcohols into terpenes and water. Then terpenes are separated, and secondary alcohols are separated from residual pine oil by heating mass with a carboxylic organic acid, of melting point of more than approximately

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25° C. Irvin W. Humphrey, Wharton, N. J., assignor, Hercules Powder Co., Wilmington, Del. U. S. P. No. 1,800,862, filed July 8, 1927.

BRITISH PATENTS

Increasing Pharmacological Action of Animal Milk

Patent is concerned with process for increasing digestibility and pharmacological activity of animal milk. Filtered, or skim milk, which has been deprived of its cream content by centrifuging, is cooled and innoculated with culture of lactic acid bacilli. If it is desired, the innoculation may also be effected with a small amount of micrococus acidi laevolactici and yeast. After air has been removed from containers by means of inert gas, the latter are hermetically sealed and milk is allowed to ferment for about six weeks at 8° to 10° C. A. Hindelang, J. von Dall'Army, J. Forster, F. Ruhland, A. Forster, R. Wehsarg and L. Will, assignors, "Saya" Gesellschaft zur Herstellung von Heilmilch, Germany. B. P. No. 343,127, filed November 8, 1929.

New Bactericides

These new bactericides are heterocyclo azo compounds. Thus a heterocyclic diazo compound is coupled with a mono- or di-aminopyridine to give the bactericidal azo compounds. A number of examples are given in the patent and properties of products explained. Schering-Kahlbaum A. G., Berlin, Germany. B. P. No. 341,598 filed November 6, 1929.

Sodium Salts of Acylamino-Phenol-Arsinic Acids

Process is for manufacture of easily soluble sodium salts of aforementioned arsinic acids. Thus the di-sodium hydrogen salts of acylaminohydroxybenzene-arsinic acids are sufficiently soluble to be suitable for injection and are also non-irritant. They are prepared by dissolving arsinic acid in the calculated quantity of sodium hydroxide or sodium carbonate solution. The salt is then precipitated with alcohol, acetone or brine. I. G. Farbenindustrie A. G., Frankfort-on-the-Main, Germany. B. P. No. 341,405, filed October 9, 1929.

New Anthelmintics

These new anthelmintics are alicyclic lactones of tetrahydronaphthalenes. They are also known as r-desmotropo-santonins and derivatives. The tetrahydro-naphthalene is for example treated with ethyl oxalate which gives the naphthoyl-formic ester, which loses carbon monoxide and yields a carboxylate. The potassium compound of this carboxylate is condensed with ethyl-alpha-bromopropionate to give the di-ester, which, when hydrolyzed, loses one carboxyl group and yields the acid and the corresponding enol-lactone. The acid is demethylated by heating with aluminum chloride in chlorobenzene, and the resulting hydroxyketo-acid is reduced with sodium amalgam and carbonic acid to give the desired lactone. I. G. Farbenindustrie A. G., Frankfort-on-the-Main, Germany. B. P. No. 341,402, filed October 7, 1929.

Acid Tooth Pastes

Feature of process of manufacture of acid tooth pastes is means taken to secure uniform composition, accomplished by carrying out colloidal grinding of ingredients at up to 70° C. Result is that gel assumes a liquid state and air is prevented from entering. Grinding may be carried out in inert atmosphere, for example, carbon dioxide. Any substances added to silica-water-glycerin gel, must be soluble in water and glycerin, so as to maintain liquid state when heated, but they must not prevent coagulation on cooling. A./S. Si-Ko. B. P. No. 347,377, filed February 25, 1930.

Therapeutically Valuable Amidines

A hydroxylated aralkyl cyanide is converted by alcoholic hydrochloric acid into the imino ether, which by interaction with ammonia or an amine gives the amidine. Thus para-hydroxyphenyl-acetamidine obtained from para-hydroxy-benzyl-cyanide by way of imino ether, has a sustained pressor action. Boots Pure Drug Co., F. L. Pyman and A. P. T. Easson. B. P. No. 343,577, filed November 22, 1929.

Crystallized Digitalis Glucoside

Crude glucoside is treated for removal of ingredients soluble with difficulty both in chloroform and dilute alcohol or methanol of about 35% concentration. These products are then allowed to crystallize from acetone or 70% alcohol. Dr. Carl Mannich, Berlin-Stetlitz, Germany. G. P. No. 514,096, filed October 5, 1928.

Glucoside From Squill

Process is concerned with preparation from squill of a glucoside which acts upon the heart. The aqueous squill substance is extracted in presence of a sufficient proportion of easily soluble salts with suitable organic solvents which must not be miscible with water. Chemische Fabrik vormals Sandoz, Basel, Switzerland. G. P. No. 511,794, filed March 17, 1927.

Anti-Bodies for Syphylis Spirocheti

The dead syphilitic germs, which are soluble in the greatest part in lecithin emulsion and which later become virulent, are injected several times and in increasing dose into the chest and belly cavities of animals, as well as into the blood vessels themselves. Then the blood, the inflamed chest and belly cavities exudations, the lymphatic glands, the spleen, the ovary and other organs are extracted with glycerin and soda solution. Dr. Salo Bergel, Berlin-Wilmersdorf, Germany. G. P. No. 502,655, filed February 19, 1925.

Betaine Sulphocyanide

This new pharmaceutical is prepared from betaine or its salts. These starting materials are treated with sulphocyanic-acid or sulphocyandies. I. G. Farben-industrie A. G., Frankfurt-am-Main, Germany. G. P. No. 515,545, filed June 29, 1927.

New Organo Antimony Compounds

An example is given of manufacture of one of these new antimony pharmaceuticals. Thus sodium antimonyl gluconate obtained by dissolving antimony oxy-hydrate, which is itself obtained by precipitation by acid from tartar emetic, in aqueous sodium gluconate. Compound formed is precipitated with alcohol. The compound gives clear aqueous solutions which are stable to neutralization with alkali in presence of excess sodium gluconate. Chemische Fabriken vormals Sandoz. B. P. No. 343,898, filed November 23, 1929.

Organic Arsinic and Antimony Compounds

These compounds are of the type OH.Alk.Co: NHAr.X. In these compounds Alk is an alkylene group, Ar is an arylene group and X is an arsinic or stibinic acid group. Various examples of these products are given. They are made from arsinic and stibinic acids, which are reacted with glycollic acid. I. G. Farben-industrie A. G., Frankfort-on-the-Main, Germany. B. P. No. 344,532, filed August 30, 1929.

Glutamic Acid Salts

Process for manufacture of such salts of glutamic acid as monosodium glutamate. Gluten flour is hydrolyzed with hydrochloric acid, solution filtered, evaporated to half volume in a vacuum, and treated with equal volume of concentrated hydrochloric acid. Precipitate of glutamic acid hydrochloride is washed with hydrochloric acid and dissolved in boiling water. Solution is treated with sufficient sodium hydroxide to neutralize acid. Precipitate of glutamic acid is collected, washed and dried, and dissolved in sufficient dilute sodium hydroxide to produce monosodium glutamate. H. D. Haride & Co., Ltd. and A. C. Stirrat. B. P. No. 347,258, filed January 23, 1930.

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Abstracts

Determining Alkaloids

The thalleioquin reaction for quinine has been made quantitative. The excess of bromine is removed by aeration and the coloration compared with a standard solution. An iodimetric development of the method enables quinine to be determined in presence of other alkaloids. The bromine compounds of morphine and most of the other opium alkaloids liberate iodine from potassium iodide, and methods of determination are based on the reactions. Codeine may be determined colorimetrically by measuring the depth of the red color formed on oxidizing its bromine compound with hydrogen peroxide. Colorimetric methods have also been devised for ipecacuanha alkaloids, based on the yellow coloration formed on aerating the bromine compounds. S. G. Walton and R. G. O'Brien. The Chemical Trade Journal and Chemical Engineer, 1931, page 364.

Medicinal Alcoholic Soaps

This article is concerned with methods for the analysis and investigation of medicinal soap preparations, including such products as spiritus saponato-camphoratus, spiritus saponatus, spiritus saponis kalini, etc. The methods are described in considerable detail. The results obtained with these methods are accurate and the methods are easy to manipulate. Walter Meyer, Chemiker Zeitung, year 1931, pages 518 to 519.

Mouth Wash Tablets

Substances suitable for mouth wash tablets include sodium benzoate, terpene-free and sesqui-terpene-free oil of peppermint, and saponin free from quillaia ingredients. The following is a formula: Thirty parts of oil of peppermint, 100 parts saponin, 500 parts of sodium benzoate. Another antiseptic highly recommended for mouth wash tablets is hexamethylenetetramine, which can be used either with peppermint oil or with this mixed with sodium benzoate. Der Parfuemeur, 1931, page 410.

Japanese Peppermint Oil

Japanese peppermint oil has a density of 0.9010 at 16° C., index of refraction of 1.4756 and angle of rotation of −35.77°. The oil was fractionated to remove menthol and during the subsequent working up neomenthol and piperitone were isolated. The terpene and sesquiterpene fractions were digested with alcoholic potash, and finally distilled over sodium. The purified erpene and sesquiterpene fractions each amounted to less than 1%. The terpene fraction was closely examined. Pinene nitrosochloride and pinene-nitrolbenzylamine as well as limonene tetrabromide were obtained. The sesquiterpene fraction consisted mainly of caryophyllene. K. J. Duncan and W. F. Short, Journal of the Society of Chemical Industry, 1931, pages 198T.

Reaction for Peppermint Oil

The so-called Rosenthaler reaction is obtained with 1% vanillin solution in concentrated hydrochloric acid, which when added to peppermint oil, produced a color which varies inversely in intensity in accordance, with menthol content. Menthol is the sole ingredient of the peppermint oil which does not give any color with the aforementioned reagent. The color is due to the presence of hydrocarbons. It has been found that both menthol and peppermint oil will give color reactions, when they are treated the vanillin solution in sulphuric acid instead of hydrochloric acid. It has been established that the color reaction is probably caused by the presence of menthene and dimenthene, which is formed by the dehydrating action of sulphuric acid on the menthol. The article also describes various color reactions and their sensitivities. I. M. Korenman, Pharmazeutische Zentralh., volume 72, year 1931, pages 273-276.

Medicinal Baths

Various bath preparations are described, based on emulsified essential oils. Thus pine needle oil and oil of juniper berries in water are emulsified with a sodium soap and gum tragacanth. Pine needle extracts are the most commonly used astringent bath preparations. H. Schwarz, Seifensieder Zeitung, year 1931, volume 58, 16-8.

Quantitative Reaction for Capsaicin

A clear extract, 5 cc. which are equivalent to one gram of the powdered sample in dry acetone is gently shaken with nine drops of hydrochloric acid and 0.1 gram of ammonium vanadate. The reaction gives a color varying from blue (for 0.08 per cent.) through green to greenish brown for 0.01% of capsaicin, (which is the limit of concentration). The brownish tint is due to oxidation products of carotene and the like. The addition of 20 drops of a 1% solution of vanadium oxychloride in carbon tetrachloride to 10 cc. of an extract in dry ether gives a more sensitive reaction. The reagent is stable. The reaction may be made quantitative by means of a range of colors, which is produced by known amounts of capsaicin in the ample. It was found that capsaicin is not present in Spanish pepper, 0.01 % or less being found in refined Hungarian paprikas. The blue compound formed with the vanadium salt, has the formula $C_{18}H_{26}NO_3.VOCI_2$. K. von Fodor, Zeitschrift Unterss. Lebensm., year 1931, volume 61, pages 94 to 100.

Santonin in Trochisi Santonini

The first step in analysis is to dry sample at 105° C., and extract with ether for 4 to 5 hours. The residue after distillation of ether is mixed with ½ gram of solid paraffin wax and refluxed with 50 grams. The operation is repeated with 15 grams of ethyl alcohol for 30 minutes. Cooled solutions are filtered. Filtrate is shaken with 15 grams of light petroleum, (boiling point of 40° to 70° C.) The alcoholic layer, after separation, is heated to boiling to remove the dissolved petroleum, and is neutralized with tenth normal alkali, indicator being phenolphthalein. Solution is refluxed with 10 cc. of tenth normal solution of alkali for 20 minutes and cooled. Excess of alkali is titrated with tenth normal hydrochloric acid. After compensation, from a blank determination, for alkali derived from apparatus, the error does not exceed 2%. P. J. Claus, Pharm. Weekblad, year 1931, volume 68, pages 414-424.

Determination of Lecithin

Oil or fat is oxidized with fuming nitric acid on a water bath until a homogeneous solution is obtained, and then evaporated to dryness. The residue is taken up with a little 10% nitric acid, cooled on ice and filtered to remove fats. The phosphates are precipitated and weighed as ammonium phosphomolybdate. The original article contains tabulations which show the nitrogen and phosphorus contents of various fats and oils. These are not constant for different samples of the same oil, nor is there any relationship between the two elements. The nitrogen is always in excess of that required for lecithin. This confirms the belief that lecithin is present as a lecithalbumin. E. Foyn, Journal Pharmacie et Chimie, volume 13, 1931, pages 465-474.

Morphine in Opium

Extractum opii is treated when suspended in water with calcium hydroxide and then lead acetate. Precipitate is removed and filtrate evaporated to dryness with ammonium carbonate. Filtration takes place through charcoal and

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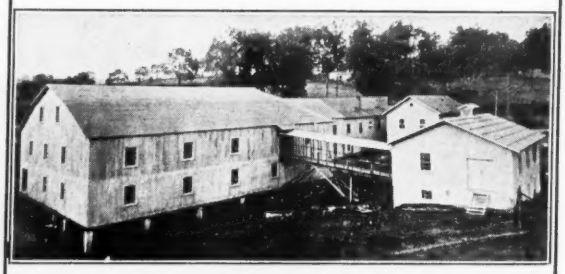

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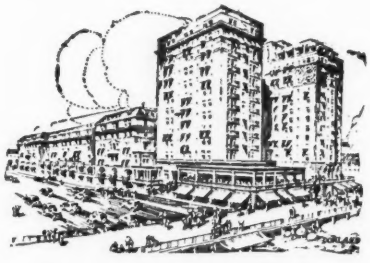

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morphine is extracted from charcoal residue and titrated with tenth normal hydrochloric acid. Lacmoid is the indicator. Anhydrous methyl alcohol is a better solvent than ethyl alcohol for this purpose. L. David and S. Novak, Pharmazeutische Zeitung, 1931, volume 76, page 289.

Cresol Soap Solutions

Various investigations have been carried out on methods used for determining cresol in liquor cresoli saponatus. The preferred method is one on which the soap is precipitated with barium chloride, the cresol extracted from the acidified liquor with light petroleum and determined gravimetrically. In presence of resin and naphtha acids the cresol soap solution is treated with concentrated solution of calcium chloride. The cresol is distilled with steam and extracted with alkali from the distillate before acidification and extraction. J. Levolt, Magyar Gyog. Tars. Ert., volume 6, pages 474-480.

Determining Essential Oil Content

It has been indicated that good, comparable and reproducable results can be obtained in analyzing the content of volatile matters in drugs, botanicals and the like when the raw materials are extracted on the Soxhlet principle by means of a suitable solvent and when the residue is treated with superheated steam. An improved form of apparatus is the subject of this particular article for carrying out this process. The new apparatus allows extraction and blowing out with superheated steam to be conducted in the same vessel, allows immediate removal of the volatile materials, rapid heating of the vessel for the blowing out process and quantitative collection of the volatile ingredients in a measuring vessel.

The material to be analyzed is mixed with sand and extracted with ethyl ether, acetone, methyl acetate, pentane, hexane. Dr. Otto Gerhardt, Der Parfuemeur, volume 5, year 1931, pages 433.

Assay of Stramonium

Ten grams of stramonium leaves are moistened with a mixture of ether and chloroform and then with dilute ammonia, and percolated with a 4 to 1 ether-chloroform mixture to remove total alkaloids. The percolate is concentrated and transferred to separator, together with chloroform washings. Ninety per cent. alcohol is added and mixture extracted with 0.2 normal sulphuric acid until alkaloids are removed. Combined acid extracts are washed with chloroform, made basic with ammonia, and alkaloids are extracted with chloroform used in successive portions The chloroform extracts after washing with water are evaporated and the residue is dissolved successively in ether and absolute alcohol, the solvent being evaporated each time. The residue, which is dried for 30 minutes at 100° C., is dissolved in absolute alcohol. A 0.02 normal sulphuric acid is added and excess acid titrated back with 0.02 normal sodium hydroxide (1 cc. of 0.02 normal solution of acid is equivalent to 0.005785 gram of alkaloids as hyoscyamine). Methyl red is indicator. A similar method is used for assay of tincture of stramonium as for percolate above. After washing, chloroform is separated and extraction repeated with two lots of chloroform (10 cc. each). Fifteen cc. of 90% alcohol are added to combined chloroform extracts, which are then treated with 0.2 normal sulphuric acid and determination completed as described above. C. M. Caines, Quarterly Journal of Pharmacy, volume 3, pages 342-348.

Morphine in Opium

The tartaric acid method developed by one of the authors gives uniform results, but when morphine content is high, results are too low. However, when larger quantities of acid and alcohol are used and when partial neutralization is effected with sodium hydroxide before evaporation, then accurate results are obtained in all cases. C. G. van Arkel and P. van der Wielen, Pharm. Weekblad, 1931, pages 309-316.

Phenylacetic Acid and Esters in Perfumery

Uses of such products, as methyl-phenyl acetate, ethyl-phenyl acetate, propyl-phenyl acetate, isobutylphenyl acetate, amylphenyl acetate and various others aromatic chemical of this type are described in some detail, particularly in making conpounded perfume preparations. Arno Mueller. Der Parfuemeur, 1931, 499-500.

Source and Time of Collection of Rhizoma Filicis

Contrary to general opinion, no regular differences in the content of extractive matter and of crude filicin, or in the toxicity towards fish, can be detected between samples of this drug gathered at widely differing altitudes, or between spring and summer-gathered samples. Among twenty two autumn and six spring-gathered samples the greatest variations in biological activity, using filmarone as standard, are less than 50% of the mean. An indication that the active principle of the drug gradually undergoes a change which cannot be detected by usual chemical assays is given by examination of 6 samples, 4 to 20 years old, which were indistinguishable in extractive and crude filicin content from the fresh drug, but were from 2 to 20 times less active biologically. Of 22 autumn-gathered samples only 3 complied analytically with the requirements of the German Pharmacopoeia, which are regarded as too stringent. L. Kofler and E. Mueller, Arch. Pharm., volume 268, 644-652.

Preservation of Birch Sap

In order to preserve freshly drawn birch sap, it is necessary to add to it about eight per cent of tartaric acid of ninety five per cent. concentration or a half a per cent. of salicylic acid or benzoic acid. When the birch sap is to be used for cosmetic purposes, then it may also be preserved by the addition of quinosol. This product is used in the proportion of one gram per liter of the sap. Pharmazeutische Zeitung.

New Hair Dyes

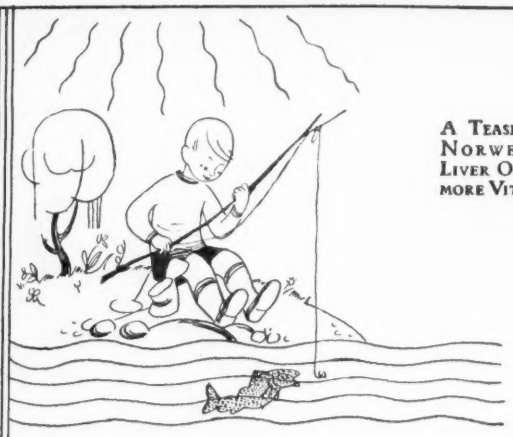
A hair dye for black hair is obtained in powdered form and gives lasting results, when made with 400 parts of henna powder, 400 parts of iron powder, 70 parts of iron chloride, 30 parts of nickel nitrate, 30 parts of pyrogallol, 80 parts of tannin and 30 parts of iron sulphide. The powders are mixed and made into a paste with hot water and applied to the hair after it has been washed with a soda solution, with water and then dried. Dr. Winter. Pharmazeutische Zeitung.

Eyebrow Pencils

A formula calls for 110 parts of yellow vaseline, 165 parts of white ceresin wax, 15 parts of white beeswax and 235 parts of benzoinated tallow. These ingredients are melted on a water bath and mixed with 350 parts of extra-fine, sieved oil black. Mass is screened, heated and stirred. It is then poured into suitable forms, before it cools. Pharmazeutische Zeitung.

Cetyl Alcohol

Cetyl alcohol can be used in the place of paraffin, ceresin wax, etc. It dissolves in hot paraffin oil, fats and fatty oils and the congealed mass forms a vasoline-like or wax-like mass, according to the proportion of cetyl alcohol contained in it. The product can then be used as a base for medicinal salves and cosmetics. All sorts of waxes, lanolin, stearin and the like can be added to these bases. Cetyl alcohol will not become rancid, it has given good results in stearate creams and skin creams with triethanolamine. Cold lanolin creams are obtained by using it with lanolin, spermaceti, beeswax, cocoa butter, paraffin oil, etc. It is useful in massage creams, and in boron and zinc salves and fatty powders. The alcohol may be mixed with all sorts of perfumes without in any way injurying the odor of the perfume. It can be used in rouge, brilliantines, nail polishes, camphorized pencils and menthol pencils, hair pomades. Cetyl alcohol mixes well with sulphur, ichthyol, iodine, hydrogen peroxide, mercury salts, etc. H. Janistyn, Der. Parfuemeur, volume 5, year 1931, number 26, pages 433-4.



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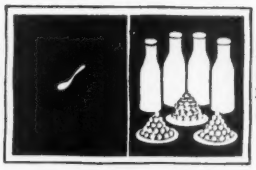

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Labels

(*Continued from page 153*)

should be avoided. Inks that will smudge or smear should be avoided. Light glue should be used in a very thin film. A winter and a summer glue should be used during the respective seasons. The glue maker should be given sample of the label and the container before he can supply a glue that will not cause trouble. The label surface of the container should be flat or curved in one direction only. Tapered containers should have labels somewhat crescent shape. Embossing of glass containers should be arranged in a manner to avoid showing up slightly off-center labeling.

Nail Cosmetics

(*Continued from page 147*)

sition for such a preparation contains 35 parts of potash alum, 65 parts of iron-free aluminum sulfate. The two chemicals are merely melted together and poured into proper forms.

Acknowledgement is made of information obtained from the article in Der Parfuemeur, 1931, Nos. 20 and 27, in preparing this article.

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Hyoscyamine Sulfate

Chemicals

Acetanilid, USP, 200 lb bbls..lb	.24	.25
Acetone, pure 350 lb drs wks..	.12	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90
Agaric, 1 oz vials .....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61
Boric, 300 lb bbls.....lb.	.09¼	.10
Cacodylic, 5 lb. bot.....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans.....lb.	3.25	3.50
Citric, USP, crys 230 lb bbl .....lb.	...	.35
USP, crys imp. 112 lb keg .....lb.	.41	.43
USP, powd 200 lb bbl...lb.	...	.35½
Diethylbarbituric, 1 lb bot lb.	4.00	4.50
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% .....lb. 5 gal demis.....lb.	...	.85
Lactic, USP, VIII 100 lb cbys lb.....	.53	.59
USP, X 100 lb cbys.....lb.	.57	.59
Phenylcinchonic.....lb.	...	3.25
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls.lb.	.40	.45
Stearic, double pressed, bags .....lb.	.09	.10
Triple pressed, bags,....lb.	.12	.13
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93
Powd 200 lb bbls.....lb.	.80	.85
Tartaric, USP, 300 lb bbls.lb	.31½	.32½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00
Amorphous, 1 oz vials....oz.	...	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.13	.15
Anhydrous, 350 lb bbls....lb.	.14	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.20	1.35
Ethyl, USP, 190 pf 50 gal bbls.....gal.	...	2.56
Grain bbls.....gal.	...	2.61
Pure tax free drums...gal.		
Ethyl.....	...	.42
Grain.....	..	.47
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.27	.35
No. 5 comp.....gal.	.28	.30
23 a, spec.....gal.	.30	.38
39 b, spec.....gal.	.39	.47
40 m, spec .....gal.	.33½	.42½
Isopropyl refd 98-99% drs. incl .....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases....lb.	1.51	1.55
Aluminum Acetotartrate kegs .....lb.	...	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls.lb.	.38	.39
Imported, 112 lb boxes..lb.	.39	.41
Carb, USP, lump 100 lb kegs .....lb.	...	.13½
USP, powd 100 lb kegs..lb.	...	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars...lb.	...	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot...lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.25	2.60
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.60	22.70
Arecoline Hydrobrom, 1 oz vials .....oz.	5.25	5.35
Aspidospermine Amorphous.oz.	...	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.	...	3.00
Barium Iodide, 5 lb box.....lb.	...	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases .....lb.	...	1.40
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.25
Betanaphtholate, 5 lb box.lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.60
Chloride.....lb.	...	3.00
Hydroxide .....lb.	...	2.90
Nitrate, 25 lb jars.....lb	...	1.25
Oxide anhydrous.....lb.	...	3.25
Oxychloride, 25 lb boxes...lb.	...	2.95
Salicylate, 25 lb boxes...lb.	...	1.65
Subcarbonate, USP, 25 lb boxes.....lb.	1.70	1.75
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.65	2.72
Subgallate, USP, 25 lb boxes .....lb.	1.75	1.80
Subiodide, 5 lb lots.....lb.	...	4.10
Subnitrate, USP, 25 lb jar.lb.	1.50	1.55
Subsalicylate, USP, 25 lb boxes.....lb.	2.55	2.60
Tannate.....lb.	...	2.30
Borax, crys USP, 400 lb bbls.lb.	...	.06
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	4.55
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.45	2.50
Citrated, 50 lb cans.....lb	2.20	2.45
Hydrobromide, 1 lb bot...lb.	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.60
Carb, USP, 175 lb bbls....lb.	.05	.06
Glycerophos, 250 lb bbls...lb.	...	1.40
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	4.85
Lactate, USP, 500 lb bbls lb.	.45	.50
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.54	.55
Refined powd.....lb.	.55	.56
½ oz tab, 100 lb cases....lb.	.67	.68
Liniment, bbls.....gal.	2.20	2.30
Monobrom, 100 lb cases...lb.	1.85	1.90
Casein edible, 100 lb kegs...lb.	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.78	.80
100 lb drums.....lb.	.73	.75
Cholesterin.....oz.	5.50	5.85
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	2.12	2.30
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	3.75	4.10
Cinchonine Alk, 100 oz tins.oz.	...	.38
Crystal.....oz.	.43	.46
Sulfate, 100 oz tins.....oz.	...	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35
Cincophen, U.S.P. bbls.....lb.	3.25	...
boxes, drms., kegs.....lb.	3.35	3.50
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP,.....oz.	...	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.22½	.23
Imp. powd. 224 lb bbls....lb.	.22½	.23
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.50	1.60
Cresol, USP, 400 lb drums...lb.	...	.20
500 lb drums.....lb.	.14	.17
DIGITALIN Pure, 1 oz vial..oz	15.00	15.50
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl .....oz.	25.00	26.00
15 grain vials.....oz.	2.50	2.70
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	...	50.00
Salicylate, 1 oz vials.....oz.	...	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	...	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	...	6.25
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.07	.07½
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES Duodenal Substance, 1 lb lots	...	5.50
Liver Substance (Hepatic) 1 lb lots.....lb.	...	4.50
Orchic Substance (Testicular)	...	4.75
Ovarian Substance, whole, 1 lb lots.....lb.	...	26.00
Ovarian Residue, 1 lb lots....	...	20.00
Pituitary Substance, whole 1 lb lots.....lb.	...	40.00
Pituitary Substance, Anterior Lobe, 1 lb lots.....lb.	...	27.00
Thyroid, U. S. P., 1 lb lots...	...	4.75
Oxgall Powder, 1 lb lots....	...	1.35
GLYCERIN, CP, 550 lb drums .....lb.	...	11½
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb. cbys.....lb	1.65	1.75
Crystals.....lb	2.25	2.50
Benzoate, 1 lb bottles....lb.	...	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50
Halazone, 5 lb bot.....lb.	2.75	3.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP. .....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.		
Hydrastinine Hydrochloride, USP, 15 gr vials .....oz.	22.50	23.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	...	40.00
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	.03½	.04½
5 oz, 1 oz vials.....oz.	13.07	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07
Hydrobromide, USP, 1 oz vial .....oz.	...	25.00
Sulfate, 1 oz vial.....oz.	...	25.07

Chemicals

Hypoquinone, 100 lb kegs...lb.	...	1.10
ICHTHYOL, tins.....lb.	4.00	4.25
Iodide Arsenous, 5 lb bot ..lb.	...	5.20
Arsenous-Mercuric soln, 5 lb bot.....qt	....	.26
Iodine, crude, 200 lb kegs...lb.	4.35	4.35
Resublimed, 10 lb tars...lb.	4.65	4.70
Tincture demis.....gal.	...	4.85
Iodoform, powd 10 lb bot...lb.	...	6.50
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.65	.66
Chloride, USP, lump 400 lb bbls.....lb.	.06	.08
Citrate, USP, VIII 25 lb can .....lb.	.94	1.01
Hypophosphite, 5 lb cans..lb.	1.55	1.65
Iodide, 1 lb bottles.....lb.	...	4.28
Phosphate, USP, 50 lb cans .....lb.	...	.69
& Potas Oxalate, 250 lb bbl .....lb.	...	.45
Pyrophosphate, USP, 50 lb .....lb.	.74	.80
& Sod Oxalate, 50 lb. cans..lb.	...	.80
Sulfate, USP, crys bbls....lb.	.04	.04½
Ferrous dried bbls.....lb.	...	.08
Valerate, tins.....lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins.....lb.	...	3.00
Powdered, tins.....lb.	...	4.65
Lead Acetate, USP, 100 lb kegs .....lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot .lb.	3.20	3.40
Lecithin, 5 oz jars.....oz.	1.00	1.30
Licorice Ext Mass, cases....lb.	.19	.20
Compound powder, bbls...lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls.....lb.	1.35	1.45
Citrate, USP, 100 lb kegs..lb.	...	1.70
Iodide, 5 lb bottles.....lb.	...	5.65
Lobeline Sulfate, ¼ oz vial...oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls.....lb.	.08	.09
English, oz blocks.....oz.	.16	.18
Glycerophosphate, 5 lb tins .....lb	3.20	3.25
Hypophosphite, 5 lb cans..lb.	1.15	1.20
Salicylate, 100 lb kegs.....lb	...	1.10
Stearate, bbls.....lb.	.23	.25
Manganese Glycerophosphate, 5 lb tins.....lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans.....lb.	1.35	1.40
Iodide, 1 lb bottles.....lb.	6.40	6.65
MENTHOL, USP, 60 lb cases .....lb.	3.75	4.00
Synthetic, cases.....lb.	*3.00*	*3.10*
Mercury Metal, 75 lb flasks...fl.	85.00	87.00
Bichloride, crys 25 lb box..lb.	...	1.30
Gran powd, 100 lb kegs..lb.	...	1.21
Bisulfate, 25 lb boxes.....lb.	...	1.48
Blue Mass, 25 lb boxes....lb.	...	.95
Powd, 25 lb boxes.....lb.	...	.96
Blue Ointment, USP, 50%, 25 lb cans.....lb.	...	1.19
Mild 30%, 25 lb cans....lb.	...	.86
33 1/3% mercury.....lb.	...	.94
Calomel, 50 lb boxes.....lb.	...	1.75
English.....lb.	2.65	2.75
Iodide, green, 25 lb jars....lb.	...	4.80
Red, USP, 25 lb jars...lb.	...	4.89
Yellow, USP, VIII, 25 lb jars.....lb.	4.80	4.80
Red *precip* Powd. USP, 25 lb boxes.....lb.	...	1.90
White precip, Powd., USP, 25 lb. boxes.....lb.	...	1.85
Salicylate, 25 lb bot.....lb.	...	2.32
With chalk, USP, 25 lb boxes .....lb.	...	.93
Methanol, Pure 1c-1 drs...gal	...	.44
Methyl Salicylate, USP, 50 lb cans.....lb.	.40	.42
Methylene Blue, USP, med 5 lb cans.....lb	2.00	2.05
Milk powd, 150 lb bbls.....lb.	.09	.12
MORPHINE Alk, 5 oz tin...oz.	10.90	10.95
Acetate, 5 oz tins.....oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots.....oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots.....oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots.....oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots .....oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks.....lb.	.04½	.05
Balls, 250 lb bbls wks.....lb.	.05½	.06
Oxgall, Purified, 5 lb bot....lb.	1.75	2.50
USP, 5 lb bot.....lb.	2.00	2.50
Oxyquinoline Sulfate, tins...lb.	8.50	9.25
Pancreatin, USP, 100 lb....lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118-120 deg MP.....lb.	.08	.09
128-132 deg MP.....lb.	.07½	.07¾
Para-Aldehyde, USP, 100 lb carboys.....lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000.lb.	...	2.25
100 lbs. 1:6000.....lb.	...	4.00
100 lbs. 1:10000.....lb.	...	6.50
Peptone, powd, 5 lb bot.....lb.	...	...
PHENOLPHTHALEIN, USP, 100 lb drums.....lb.	.80	.82
5 lb cans 100 lb lots..lb.	.88	.93
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots .....oz.	...	3.25
Nitrate, 25 oz lots.....oz.	...	3.25
Single ounce.....oz.	...	3.50
Alkaloid, 15 gr vials.....vl.	...	.75
Piperadine, 25 oz bottles.....lb.	...	8.00
Popodhyllin 5 lb bottles.....lb.	4.35	4.50
Potassium Acetate, USP, 100 lb kegs.....lb.	.29	.30
Bicarb, USP, crys 320 lb bbls .....lb.	.09½	.10
Bromide, USP, crys 100 lb cs .....lb.	.34	.35
Citrate, USP, 50 lb bbl....lb.	.42½	.43
Guaiacol Sulfonate.....*lb.*	*1.95*	*2.25*
Potassium Hypophosphite, 10 lb. cans .....lb.	.75	.80
Iodide, USP, 100 lb cases..lb.	3.50	3.55
Lactophosphate, 4 oz bot..lb.	...	.90
Permangan, USP, crys, 100 lb drs wks.....lb.	.15	.15½
Phosphate dibasic pure, kegs .....lb.	...	.49
Salicylate, 25 lb cans....lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs.....lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins.....*lb.*	...	.65
Pyrogallol, USP, see Acid Pyrogallic.....	...	...
Quinidine Alk, 100 oz tins...oz.	.70	.75
Sulfate, 100 oz tins.....oz.	...	.50
QUININE SULFATE, USP, 100 oz tins.....oz.	...	.30
1 oz tins, 100 oz lots....oz.	...	.40
Acetate.....oz.	...	.72
Arsenate.....oz.	...	.72
Benzoate.....oz.	...	.73
Bisulfate, USP.....oz.	...	.36
Citrate.....oz.	...	.46
Dihydrobromide.....oz.	...	.50
Dihydrochloride, USP....oz.	...	.50
Ethyl Carbonate, 16 oz tins .....oz.	...	.54
Ferrocyanide.....oz.	...	.73
Formate.....oz.	...	.67
Glycerophosphate.....oz.	...	.80
Hydrobromide, USP.....oz.	...	.45
Hydrochlorosulfate.....oz.	...	.50
Hypophosphite.....oz.	...	.65
Lactate.....oz.	...	.66
Phenolsulfonate.....oz.	...	.78
Phosphate.....oz.	...	.55
Salicylate, USP.....oz.	...	.48
Tannate, USP.....oz.	...	.30
Tartrate.....oz.	...	.73
Valerate.....oz.	...	.78
Urea Hydrochloride, USP .....oz.	....	.52
Rennet, N. F. 5 lb 1:25,000...lb.	2.95	3.50
Resorcinol, USP, 25 lb cans..lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl .....lb.	.18	.19
Rock Sugar, 5 lb boxes.....lb.	...	.15
Saccharin, USP, 10 lb cans...lb.	1.70	1.80
USP, Soluble, 10 lb cans...lb.	*1.75*	1.85
Salicin, USP.....lb.	...	12.50
SALOL, USP, 100 lb drums..lb.	...	.90
Saltpetre, powd, bbls wks....lb.	.06½	.08¼
Santonin, USP, bulk.....lb.	123.00	133.00
Saponin, refined.....lb.	1.30	1.50
Stedlitz Mixture, 250 lb bb..lb.	.14½	.14¾
Silver Metal, American.....oz.	...	.42¾
Iodide, 16 oz lots.....oz.	...	.69
Nitrate, 100 oz bottles....oz.	.21⅛	.23⅛
Nucleinate, bulk.....oz.	...	.37
Proteinate.....oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls.....lb.	.44	.48
Bromide, USP, 100 lb kegs.lb.	.34	.35
Cacodylate, USP, 25 lb bot .....lb.	4.75	5.90
Citrate, USP, X 50 lb kegs.lb.	.34½	.36
USP VIII, 50 lb kegs....lb.	.29½	.31
Glycerophosphate, USP, crys 25 lb cans.....lb.	1.40	1.55
Powder, 25 lb tins.....lb.	1.45	1.60
Soln, USP, 25 lb tins...lb.	1.05	.120
Hypophosphite, USP, 25 lb cans.....lb.	.60	.65
Iodide, USP, 25 lb jars...lb.	4.25	4.30
Phosphate (Mono-Sodium), 100 lb kegs.....lb.	.30	.31
Di-Sodium USP, granular, 275 lb bbls.....lb.	.07½	.08
Pyrophosphate, 100 lb kegs .....lb.	...	.29
Salicylate, 100 lb kegs....lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs.....lb.	...	.25
Sulfocyanate, CP crys, jars included.....lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk.....oz.	.65	.70
Single oz vial.....oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs.....lb.	.46	.47
Carb, 100 lb kegs wks....lb.	...	.20
Iodide, USP, 25 lb jars....lb.	...	4.00
Lactate, kegs.....lb.	.90	1.10
Nitrate, 600 lb bbls NY...lb.	.08	.08½
Imp. bbls NY.....*lb.*	*.08*	.08½
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial.oz.	19.00	19.00
Crystals.....*lb.*	*75.00*	*75.00*
Strychnine Alk, USP crys, 100 oz tins.....oz.	...	.61
Powdered.....oz.	...	.51
Acetate.....oz.	...	.65
Arsenate, 25 oz cans....oz.	...	.65
Glycerophosphite, USP...oz.	...	.65
Hydrobromide.....oz.	...	.65
Hydrochloride.....oz.	...	.65
Hypophosphite.....oz.	...	.75
Nitrate, USP.....oz.	.55	.72
Phosphate.....oz.	...	.65
Sulfate, USP, powd.....oz.	...	.42
Sugar, refined, 275 lb bbl 100 lb	*5.80*	*5.90*
Milk, USP, 200 lb bbls...lb.	.18	.20
Sulfonethylmethane, USP, 10 *lb boxes*.....*lb.*	*3.85*	*4.05*
Sulonmethane, USP, 10 lb box .....lb.	2.65	3.85
Sulfur flwrs, washed, USP, 125 lb bbl.....lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	4.55
***TARTAR EMETIC**, USP, 300* lb bbls.....lb.	.31	.32
Terebene, tins.....lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs.....lb.	.35	.37
Theobromine Alk, 5 lb cans..lb.	1.90	2.25
Sod. Salicylate, 1 lb bot...lb.	...	2.10
Sod. Benzoate, 1 oz vials..oz.	...	1.00
Thymol, USP, 25 lb tins....lb.	1.65	1.90
Iodide kegs.....lb.	6.00	7.00
Veratrine Alkaloid.....oz.	...	2.25
Sulfate, 1 oz vials.....oz.	...	2.25
Witch Hazel Ext., 50 gal bbl .....gal.	.60	.80
Zinc Carb, USP, 100 lb keg..lb.	.28	.31
Chloride, USP, 25 jars ex..lb.	.24	.29
Iodide, 5 lb bottles.....lb.	...	5.22
Oxide, USP, 100 lb bbls...lb.	.13	.14
Stearate, USP, 50 lb bbl..lb.	.18	.20
Sulfate, USP, 100 lb bbl..lb.	.08	.09
Sulfocarbolate, 100 lb kegs..lb.	.23	.26

Miscellaneous

Castor Oil, odorless, bbls.....lb.	...	.13½
Chalk drop, 175 lb. bbls.....lb.	...	.03¼
Precip. light, 250 lb. cask..lb.	...	.04½
Heavy 540 lb. casks.....lb.	...	.02½
Bulk.....ton	...	5.00
English light, bags.....lb.	...	.04¾
English light, casks.....lb.	.05½	...
Cocoa Butter, 12 lb. box....lb.	.42	.45
Cod Liver Oil Nor. 30 gal. bbls	30.00	31.00
Newfoundland.....bbl.	...	31.00
Collodion U. S. P. 30 lb. dr...lb.	...	.23
Corn Syrup 42° 50 gal. bbl. .....100 lb.	3.91	4.16
Gelatin, USP, Silver 100 lb. cases.....lb.	.55	.60
Pure Food, 50 lb. bbl.....lb.	.53	.55
Glucose, (grape sugar) dry 70° bags c-1 NY.....100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases .....gross	...	3.75
Imported, 5 gr. cs.....gross	...	3.50
Kaolin, Bags.....lb.	.06	.08
Colloidal Grade 200 lb. tin lined wooden drums....lb.	.15	.29
Mineral Oil White, 50 gal. bbls. 80-85 vis.....gal.	.45	.50
85-90 vis.....gal.	.65	.70
125-130 vis.....gal.	.75	.85
290 vis.....gal.	.80	.90
Russian 110-115 vis.....gal.	.69	.79
145-155 vis.....gal.	.70	.75
320-330 vis.....gal.	.80	.90
Olive Oil, Edible bbls.....gal.	1.55	1.65
Paraffin Wax, fully refined, slabs 125 @ 127 A.M.P. bags lb	...	.03
130 @ 132 A.M.P. bags lb.	...	.04¼
135 @ 137 A.M.P. bags lb.	...	.05
Petrolatum, Lily White, USP, 400 lb. bbl.....lb.	.08	.08½
Snow White USP, 400 lb. bbls.....lb.	.09	.11
Rice Starch, 140 lb bags....lb.	.09	.10
Soap Castile, bars 40 lb. Case .....Cs.	...	12.75
Powd. USP 250 lb. bbls...lb.	.26	.28
Green, USP, 450 lb. bbls...lb.	.07¼	.07½
Neutral, powd. bbls.....lb.	.17	.18
Talc, Italian, 220 lb bags...ton.	60.00	80.00
French, 220 lb bags.....ton.	40.00	45.00

Aromatics and Essential Oils

Acetophenene, CP, 1 lb bot	.lb.	3.50	3.65
Aldehyde, C 8 (Octyl) 1 lb bot	.lb.		40.00
C 7, 1 lb bot	.lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot	.lb.		120.00
C 10 (Decyl), 1 lb bot	.lb.		38.00
C 14, 1 lb bot	.lb.		22.00
C 16, 1 lb bot	.lb.		20.00
AMYL ACETATE, pure, 25 lb cans	.lb.	.43	.50
Butyrate, 1 lb bot	.lb.	1.25	1.50
Butyrate, 5 lb bot	.lb.		1.00
Cinnamate, 5 lb bot	.lb.	9.50	9.75
Formate, 1 lb bot	.lb.		1.90
Formate, 5 lb bot	.lb.		1.75
Phenyl Acetate, 1 lb bot	.lb.	4.50	5.00
Salicylate, 100 lb cbys	.lb.	1.25	1.30
Imported	.lb.	2.25	2.50
Anethol, 2 lb bot	.lb.	1.25	1.50
Anisic Aldehyde, 1 lb bot	.lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys	.lb.		
50 lb cbys	.lb.	1.35	1.45
FFC, 40 lb cbys	.lb.	1.25	1.35
Benzoic Ether, see Ethyl Benzoate			
Benzophenone, 1 lb bot	.lb.	2.25	2.75
Benzyl Acetate, 100 lb cbys	.lb.	.65	.85
Alcohol, 5 lb bot	.lb.	.85	.95
BENZYL BENZOATE		1.10	1.15
Medicinal, FFC	.lb.		1.40
Buytrate, CP, 1 lb bot	.lb.	9.25	9.50
Benzyl Cinnamate, 1 lb bot	.lb.	7.00	7.25
Formate, 1 lb bot	.lb.	3.25	3.35
Propionate, 1 lb bot	.lb.	2.50	2.65
Succinate, 1 lb bot	.lb.	5.25	5.50
Valerate, 5 lb bot	.lb.	3.00	3.25
Borneol, 1 lb bot	.lb.	1.50	2.00
Bornyl Acetate, 1 lb bot	.lb.	1.70	2.80
Bromstyrol, 25 lb cases	.lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot	.lb.		
Carvol, 5 lb bot	.lb.	3.00	3.40
Cinnamic Acid, 5 lb cans	.lb.	3.25	3.50
Alcohol liquid, 1 lb bot	.lb.	2.50	2.60
Crystallizable	.lb.	7.00	8.00
Aldehyde	.lb.	2.25	2.50
Imported, 1 lb bot	.lb.	2.75	3.00
Citral, 25 lb cans	.lb.	3.00	3.35
Citronellal 1 lb bot	.lb.	2.00	4.00
Citronelyl Acetate, 1 lb bot	.lb.	4.25	4.50
Coumarin, 25 lb cans	.lb.	3.50	4.00
DECYL ALCOHOL	.lb.	22.00	25.00
Diphenyloxide, 25 lb tins	.lb.	1.00	1.15
Diphenyl Methane	.lb.	1.75	2.00
Duodecyl Alcohol	.lb.	20.00	22.00
Ethyl Acetate, pure, 5 lb bot	.lb.	.06	.07
Benzoate, 5 lb bot	.lb.	1.50	1.75
Ethyl Butyrate, 5 lb bot	.lb.	1.80	2.00
Caproate, 1 lb bot	.lb.	3.25	3.50
Cinnamate, 1 lb bot	.lb.	4.00	4.50
Formate, 5 lb bot	.lb.	1.00	1.25
Methyl Paracresol, 1 lb bot	.lb.	3.25	3.50
Phenyl Acetate, 5 lb bot	.lb.	3.75	4.00
Valerate, 5 lb bot	.lb.		3.75
Salicylate, 5 lb bot	.lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans	.lb.	.75	.80
Eugenol, USP, 25 lb cans	.lb.	3.00	3.50
Geraniol, 50 lb cases	.lb.	1.75	2.35
Geranyl Acetate, 1 lb bot	.lb.	2.75	2.80
Butyrate, 1 lb bot	.lb.	13.00	13.50
Formate, 1 lb bot	.lb.	12.00	12.50
Heliotropin, 100-10 lbs	.lb.	1.65	1.75
Imported	.lb.	1.95	2.05
Hydroxycitronellal, 1 lb	.lb.	5.00	7.00
Indol, CP, 1 oz bot	.oz.	2.90	3.00
IONONE, 1 lb bot 100%	.lb.	5.00	6.00
Alpha	.lb.	4.50	4.70
Beta	.lb.	5.70	5.75
Methyl	.lb.	5.00	5.25
Iso Borneol	.lb.	2.25	2.35
Iso Bornyl Acetate	.lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot	.lb.	2.75	3.00
Iso-Eugenol, 1 lb bot	.lb.	3.75	3.80
Iso-Safrol, 1 lb bot imp	.lb.	1.75	1.85
Domestic, 5 lb bot	.lb.	3.50	3.75
Linalol from Bois de Rose, 5 lb bot	.lb.	1.90	3.90
Linalyl Acetate, 1 lb bot	.lb.	2.00	3.00
Benzoate, 1 lb bot	.lb.	13.00	14.00
Formate, 5 lb bot	.lb.	10.50	12.00
METHYL ACETOPHENONE	.lb.	2.70	2.85
Anthranilate, 1 lb bot	.lb.	2.25	2.30
Imported	.lb.	2.70	2.75
Anthranilic Acid	.lb.	11.75	12.00
Benzoate, 5 lb bot imp	.lb.	1.75	1.85
Domestic, 5 lb bot	.lb.	1.75	2.00
Cinnamate, 1 lb bot	.lb.	3.75	4.25
Heptenone, 1 lb bot	.lb	3.50	4.00
Paracresol, 1 lb bot	.lb	4.50	8.00
Phenylacetate, 5 lb bot	.lb	3.75	4.00
Salicylate, USP, 500 lb dr	.lb.		.40
50 lb cases	.lb.		.42
Mirbane rect. 1,000 lb drs	.lb.	.12	.13
Musk Ambrette 1 lb cans	.lb	7.25	7.50
Ketone 1 lb cans	.lb	7.75	7.90
Xylene 5 lb cans	.lb.	2.25	2.85
Nerolin 1 lb cans	.lb.	1.35	1.40
Octyl Alcohol 1 lb bot	.lb.	16.00	18.00
Oenanthic Ether lb bot	.lb.	1.90	2.00
Oleoresin Aspidum			
USP, bot and tins	.lb.		1.25
Capsicum, USP, bot and tins	.lb.	2.75	3.50
Cubeb, USP, bot and tins	.lb.	3.00	3.25
Ginger bot and tins	.lb.	2.35	2.85
Malefern see Aspidum			
Orris, bot & tins	.lb.	15.00	18.00
Pepper, black, USP, bot & tin			9.50
Vanilla, bot & tins	.lb.	8.00	8.75
Paracresol Methyl Ether	.lb.	4.25	4.50
Paracresyl Acetate	.lb.	5.50	5.75
Para Cymene Refd 110 gal dr	.gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot	.lb.	4.75	5.00
Imported 50%	.lb.	4.75	5.00
100%	.lb.	8.00	8.25
Phenylacetic Acid 1 lb bot	.lb.	2.65	2.90
Phenyl Diacetate 1 oz bot	.oz.	3.00	3.25
1 lb bot	.lb.	8.00	10.00
Imported	.lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot	.lb.	4.40	4.65
Phenyl Ethyl Acetate	.lb.	8.25	8.75
Butyrate 1 lb bot	.lb.	15.00	16.00
Formate, 1 lb bot	.lb.	19.00	21.00
Propionate, 1 lb bot	.lb.	16.00	18.00
Valerate, 1 lb bot	.lb.	19.00	20.00
Phenylpropylalcohol, 1 lb bot	.lb.	8.50	9.00
Rhodinol, 1 lb bot	.lb	6.25	20.00
Saffrol, drums	.lb.	.30	.32
60 lb cans	.lb.	.32	.34
Skatol, 1 oz bot	.lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans	.lb.	.85	.90
Imported, 25 lb cans		.85	.90
TERPINEOL, CP, 1000 lb drs	.lb.	.27	.29
50 lb cans	.lb.	.31	.33
Absolute, 25 lb cans	.lb.	.48	.50
Imported, 25 lb cans	.lb.	.58	.60
Valerianic Ether see Ethyl Valerate			
Vanillin (Clove Oil), USP	.lb.	5.50	5.75
(Guaiacol) USP	.lb.	5.00	5.25

Essential Oils

Almond Bitter, USP, 5 lb bot	lb.	2.25	2.35
Bitter, ffPA, 5 lb bot	.lb.	2.35	2.50
Sweet, 56 lb cans	.lb.	.44	.47
Almond Meal, 25 lb cans	.lb.	.20	.21
Amber crude, 25 lb tins	.lb.	.15	.17
Rectified, 25 lb tins	.lb.	.50	.53
Amber liquid, 400 lb drs	.lb.	2.20	2.30
Ambergris, Black, boxes	.oz.	14.00	15.00
Gray boxes	.oz.	32.00	36.00
Angelica Root, 1 lb bot	.lb.	25.00	35.00
Anise Tech, 400 lb drums	.lb.	.44	.46
USP, 60 lb cans	.lb.	.46	.48
Apricot Kernel, 50 lb cans	.lb.	.26	.27
Bay, 25 lb tins N. F. V., 50.55% Phenol	.lb.	2.00	2.20
Terpeneless	.lb.	4.25	4.45
BERGAMOT, 25 lb coppers	.lb.	2.00	2.25
Terpeneless	.lb.	6.25	9.25
Artificial, 25 lb cans	.lb.	1.25	1.50
Birch, Sweet, Northern, 25 lb tins	.lb.	3.00	3.10
Southern, 25 lb tins	.lb.		1.85
Birch Tar, rect., 5 lb bot	.lb.	.50	.55
Crude, 50 lb tins	.lb.	.13	.14
Bois de Rose, tins			
Brazillian	.lb.	.90	1.00
Cayenne, tins	.lb.	1.40	1.60
Cade, 25 lb cans	.lb.	.25	.26
Cajuput, native, 50 lb tins	.lb.	.57	.62
Calamus, 5 lb bot	.lb.	2.75	3.00
Camphor Sassa, 1000 lb drs	.lb.	.21	.22
White, 400 lb drs	.lb.	.17	.18
Cans, 50 lbs	.lb.	.19	.20
CANANGA, Native 25 lb tins	.lb.	1.75	1.90
Rectified, 25 lb tins	.lb.	2.10	2.20
Caraway, USP	.lb.	1.50	1.65
Cardamon, NF, 1 lb bot	.lb.	20.00	25.00
Cascarilla, USP, 1 lb bot	.lb.	65.00	80.00
Cassia, Redist, USP, 50 lb cans	.lb.	.95	1.00
Cedar Leaf, 50 lb tins	.lb.	.85	1.00
Cedar Wood, light, 1000 lb drs	.lb.	.33	.35
Celery, 1 lb bot	.lb.		7.50
Chaulmoogra, USP 80 lb cases	lb.		1.50
Cinnamon Ceylon, 1 lb bot	.lb.	9.00	10.00
Leaf, 5 lb bot	.lb.	1.85	1.95
CITRONELLA Ceylon, 1000 lb drs	.lb.	.37	.40
50 lb tins	.lb.	.41	.43
Java, 400 lb drs	.lb.	.55	.57
50 lb tins	.lb.	.57	.59
Civet, Abyssin, horns	.oz.	2.10	3.00
Cloves, USP, 50 lb cans	.lb.	1.35	1.40
6 lb bot	.lb.	1.95	2.00
Copaiba	.lb.	.45	.50
Coriander, USP, 10 lb bots	.lb.	4.50	4.75
Croton USP, 25 lb tins	.lb.	4.75	5.25
Cubebs, USP, 5 lb bot	.lb.	2.70	2.80
Cumin, 1 lb bot	.lb.	7.00	7.50
Dill, 25 lb cans	.lb.	3.75	5.25
Erigeron, 20 lb tins	.lb.	1.25	1.35
EUCALYPTUS Austl, USP, 56 lb cans, cases	.lb.	.30	.31
500 lb drs	.lb.	.28	.29
Fennel, USP, 25 lb tins	.lb.	.95	1.10
Geranium African, 25 lb tins	.lb.	4.00	4.90
Bourbon, 28 lb tins	.lb.	3.90	4.50
Turkish, 28 lb tins	.lb.	2.10	2.25
Ginger, 1 lb bot	.lb.	4.35	4.50
Gingergrass, 28 lb tins	.lb.	2.50	2.70
Grape Fruit	.lb.	2.90	3.00
Hemlock, 25 lb tins	.lb.	1.00	1.05
Juniper Berries, USP, 25 lb tins	.lb.	1.50	1.55
Wood, 50 lb tins	.lb.	.50	.60
Labdanum, 5 lb bot	.lb.	5.50	6.00
LAVENDER, USP, 28 lb tins	lb	1.90	2.10
Spike Spanish, 50 lb cans	.lb.	.43	.48
Lemon Ital, 25 lb cans	.lb.	1.10	1.15
California 35 lb cbys	.lb.	.80	.90
Lemongrass, native, 50 lb cans	.lb.	.65	.67
Limes, expressed, 25 lb tins	.lb.	12.50	14.15
Distilled, 25 lb tins	.lb.	10.00	11.00
Linaloe Mex., 70 lb cases	.lb.		1.75
Mace, distilled, 50 lb tins	.lb	1.20	1.25
Mandarin, 25 lb cases	.lb.	4.35	4.85
Musk Pods Cabardine, tins	.lb.		
Musk Tonquin, tins, Pods	.oz.	24.00	26.00
Grains Cabardine, tins	.oz.		
Tonquin, tins, Grained	.oz.	28.00	34.00
MUSTARD, USP, 1 lb bots	.lb.	9.50	10.00
Artif, USP, 5 lb bot	.lb.	1.55	1.65
Neroli Bigarade, ¼ & ½ & 1 lb bot	.lb.	125.00	250.00
Petale, 1 lb bot	.lb.	160.00	170.00
Artificial, 1 lb bot	.lb.	5.00	15.00
Nutmeg, USP, 50 lb tins	.lb	1.05	1.10
ORANGE BITTER, 25 lb tins	.lb	2.35	2.60
Sweet W Ind, 25 lb tins	.lb	1.85	2.00
Italian, 25 lb cop	.lb	2.05	2.30
Orange American, Cold pressed 25 lb tins	.lb.	1.85	1.90
Distilled, 25 lb tins	.lb.	1.00	1.05
Spanish, 25 lb tins	.lb.		2.25
Oil Orris, concrete	.oz.	4.75	5.00
Origanum, 50 lb cans tech	.lb.	.25	.27
Parsley, 1 lb bot	.lb.	7.50	7.75
Patchouli, 5 lb bot	.lb.	4.50	4.85
Pennyroyal, dom, 25 lb tins	.lb.	1.75	1.95
Imported, 25 lb tins	.lb.		1.05
Pepper Black lb			6.00
Peppermint, nat, 60 lb cases	lb.	1.80	1.90
Redis, USP, 60 lb cs	.lb.	2.00	2.15
Petit Grain S A., 25 lb tins	.lb.	1.25	1.35
French, 1 lb bot	.lb.	4.50	4.75
Italian, 25 lb tins	.lb.	2.20	2.30
Pimento Leaf, 25 lb tins	.lb.	1.50	1.65
Berries, 25 lb tins	.lb.	3.00	3.10
Pineedle Siberian, cans	.lb.	.60	.65
Pinus, Sylvestris, 25 lb tins	.lb.	1.30	2.00
Pumilio, USP, 25 lb tins	.lb.	1.90	1.95
Rose Fr, 8, 16, & 32 oz pkgs	.lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs	.oz.	10.50	11.50
Rosemary, USP, 27½ lb tins	.lb.		.44
1000 lb drums	.lb.		.43
Tech, 25½ lb tins	.lb.		.37
Rue, 1 lb bot	.lb.	3.00	3.10
SANDALWOOD, E Ind ,USP, 100 lb case	.lb.	7.50	7.75
W Indian (Amayris), 25 lb tins	.lb.	2.85	2.95
Australian, Tins		5.65	5.65
Sassafras, USP, 50 lb cans	.lb.	1.10	1.12
Artificial, 1000 lb drs, 60 lb cans	.lb.	.27	.29
Safrol, cans	.lb.	.36	.38
Savin, 50 lb tins	.lb.	2.10	2.35
Snakeroot, Canada	.lb.	8.50	8.75
SPEARMINT, USP, 50 lb tins	lb	1.70	1.80
Spruce, 50 lb tins	.lb	.95	1.00
Tansy, American, 25 lb tins	.lb.	2.50	2.65
Tar, 50 gal bbls	.lb.	.25	.30
USP, 50 gal bbls	.lb.	.75	1.50
Thyme, red, NF, 25 lb tins	.lb.	.65	.68
White, NF, 25 lb tins	.lb.	.83	.85
Tech, 110 lb drums	.lb.	.60	.70
Turpentine, USP, rect cbys	.lb.	.27	.30
Vetivert Bourbon, 10 bot	.lb.	4.75	5.00
Indian, 1 lb bot	.lb.	25.00	38.00
Java, 1 lb bot	.lb.	12.00	13.00
Wine, heavy, 1 lb bot	.lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin	.lb.	8.00	10.00
Southern, 25 lb tins	.lb.	3.75	4.00
Synthetic see Methyl salicylate			
Wormseed, Balt, 25 lb tins	.lb.	2.90	3.05
Wormwood, dom, 25 lb tins	.lb.	6.25	6.50
Ylang Ylang Bourbon, 10 lb tins No. 1	.lb.	5.25	5.50
10 lb tins No. 2	.lb.	5.20	5.25
Manila, 1 lb bot	.lb.	30.00	36.00

Aconite Root, USP, bags	lb.	.13	.14
Agar Agar, No. 1, bales	lb.	1.15	1.20
Agar Agar No. 2, bales	lb.	1.07	1.10
Almonds Meal	lb.	.25	.30
Aletris Root, bags	lb.	.21	.22
Alkanet Root, bags	lb	.09	.10
ALOES, Cape, 400 lb cases.	lb.	.11	.12
Curacao, 100 lb cases	lb.	.23	.25
Socotrine, Whole, 300 lb cs	lb.	.32	.37
Althea Root, bags	lb.	.20	.22
Cut cases	lb.	.18	.25
Angelica Root, bags	lb.	.13	.14
Angostura Bark, bags	lb	.18	.19
Anise Star case	lb	.11	.11½
Spanish, bags	lb	.07½	.08
ARABIC GUM, White, No. 1, 220 lb bags	lb.	.21	.22
Seconds, 220 lb bags	lb.	.20	.21
Sorts, Amber, 220 lb bags	lb.	.09	.09½
Powd, USP, 300 lb bbls	lb.	.14	.17
Areca Nuts, 100 lb bbls	lb.	.05	.07
Powd, 100 lb bbls	lb.	.10	.11
Arnica Flowers, bales	lb.	.11½	.13½
Root, bags	lb.	.42	.43
Arrowroot, St. Vincent, powd bbls	lb.	.08	.09
Asafoetida, 250 lb cases	lb.	.18	.19
Powd, 50 lb boxes	lb.	.35	.36
Balm Gilead Buds, bags	lb.	.27	.28
Balmony Herbs, bales	lb.	.13	.15
BALSAM COPAIBA Para, 80 lb cases	lb.	...	.23
South American, USP, 80 lb cases	lb.	...	.24
Peru, 120 lb cases	lb.	1.30	1.35
Tolu, 90 lb cases	lb.	.65	.70
Barberry Bark, of root, bags	lb.	.17	.19
Bayberry Bark, bales	lb.	.08	.09
Wax bbls	lb.	.22	.25
BELLADONNA LEAVES, bale	lb.	.14	.16
Root, bags	lb.	.11	.12
Bees Wax, White, cases	lb.	.38	.42
Yellow refined cases	lb.	.28	.32
Yellow Crude Cases	lb.	.23	.25
Benzoin Gum, Siam, boxes	lb.	1.20	1.30
Sumatra, cases	lb.	.30	.31
Berberis Aquafolium Root, bags	lb.	.09	.10
Beth Root, bags	lb.	.09	.10
Black Indian Hemp Root, 100 lb bags	lb.	.12	.13
Blood Root, bags	lb.	.11	.11½
Blueflag Root, bags	lb.	.13	.14
Boldo Leaves, bales	lb.	.15	.17
Boneset Herb, bales	lb.	.08	.09
Borage Flowers, bales	lb.	.12	.13
Broomtop Herb Cut, bales	lb.	.07	.08
Bryonia Root, bags	lb.	.10	.11
BUCHU LEAVES Short, 250 lb. bales	lb.	.20	.21
Long bales	lb.	.75	.80
Buckbean Leaves, bales	lb.	.07	.08
Buckthorn Bark, bags	lb.	.04½	.05
Berries, bags	lb.	.30	.35
Burdock Root, bags	lb.	.08	.09
Seed bags	lb.	.30	...
Burgundy Pitch, 110 stand gross for net	lb.	.08	.09
Imported	lb.	.10	.11
Calabar Beans, bags	lb.	.20	.21
Calamus Root, blchd cases	lb.	.35	.36
Unbleached, bags	lb.	.07	.08½
Calendula Petals, imp bales	lb.	.28	.30
Calisaya Bark, bales	lb.	.19	.20
Powdered, bbls	lb.	.25	.26
Canary Seed, South America, bags	lb.	.05	.05½
Dutch, bags	lb.	.05	.06
Candelilla Wax, bags	lb.	.13½	.14
Cannella Alba Bark, bales	lb.	.25	.26
Cannabis, U.S.P.	lb	.19	.26
Cantharides, Chinese, cases	lb.	.35	.40
Powdered, boxes	lb.	.60	.63
Russian, cases	lb.	.70	.75
Powdered, boxes	lb.	.75	.77
Caraway Seed, African, bags	lb.	.04½	.05¾
Dutch, 11 lb bags	lb.	.06¼	.06½
Cardamon bleached, cases	lb.	1.10	1.15
Decorticated, cases	lb.	.54½	.55
Cascara Amarga, 150 lb bbls	lb.	Nom	...
So called bales	lb.	.50	.75
CASCARA SAGRADA, 1928 bark	lb.	.17	.18
1929 bark	lb.	.16½	.18
1930 bark	lb.	.12	.13
Cascarilla Bark, quills, bales	lb.	.90	1.00
Siftings, bbls	lb.	.65	...
Cassia Batavia No. 1 bbls	lb.	.07	.07½
Shortstick, bales	lb.	.06¼	.06½
Batavia No. 3, bales	lb.	.06	.06½
China Select Rolls, cases	lb.	.03½	.03¾
Broken, bales	lb.	.05½	.05¾
Saigon, thin	lb.	.20	.21
Buds, cases	lb.	.15	.16
Fistula, baskets	lb.	.08	.09
Catnip, Herb, bales	lb.	.18	.19
Celery Seed, bales	lb.	.17	.17½
Ceresin Wax, White, bags	lb.	.15	.20
Yellow 200 lb. bags	lb.	.11	.14
Imp. 100 lb. bags	lb.	.25	.38
CHAMOMILE FLOWERS Roman, bales	lb.	.37	.40
Hungarian, cases	lb.	.13	.14
Charcoal Willow, powd, bbls	lb.	.06	.06½
Wood, powd, bbls	lb.	.04	.05
Chestnut Bark	lb.	.07	.08
Leaves bales	lb.	.05	.05½
Chicle Gum, lb bbls	lb.	.58	.75
Chiretta, bales	lb.	.16	.19
Cinnamon, Ceylon, No. 1, bales	lb.	.15	.16
No. 2 bales	lb.	.12	.12½
No. 3 bales	lb.	.11½	.12
Clover Tops, Red, bags	lb.	.07	.08
Cloves Zanzibar, 135 lb bbl	lb.	.19½	.20
Cochineal, Black	lb.	.69	...
Silver	lb.	.85	...
Cohosh Root, Black, bags	lb.	.05	.06
Blue, bags	lb.	.06	.07
Colchicum Root, bags	lb.	.07	.08
Seed, bags	lb.	.65	.70
COLOMBO ROOT, bags	lb.	.06	.07
Colocynth Pulp, bales	lb.	.19	.20
Coltsfoot Leaves, bags	lb.	.06	.07
Comfrey Root, bags	lb.	.10	.11
Condurango Bark, bags	lb.	.09	.10
Coriander Seed, Morocco, bags	lb.	.03½	.04
Bleached, bags	lb.	.05½	.06
Corn Silk, bales	lb.	.05½	.06½
Cotton Root Bark, bales	lb.	.07	.08
Cowhage, 1 oz tins	lb.	1.00	...
Cramp Bark so called bales	lb.	.05½	.06
True, bags	lb.	.28	.30
Cranesbill Root, bags	lb.	.09	...
CUBEB BERRIES, XX bags	lb.	.32	.33
Powdered, boxes	lb.	.34	.35
Culvers Root, bags	lb.	.13	.14
Cumin Seed, Malta, bags	lb.	.12½	.12¾
Morocco, bags	lb.	.08	.08½
Cuttlefish, Bone Trieste, Straps	lb.	.19	.22
French, boxes	lb.	.18	.21
Powdered, bbls	lb.	.09	.10
Broken, bales	lb.	.07	...
Damiana Leaves, bales	lb.	.15	.16
Dandelion Root, Imp. bags	lb.	.12	.13
Deer Tongue Leaves, bales	lb.	.11	.13
Digitalis Leaves, bales	lb.	.11	.12
Dogwood Bark, Jamaica bags	lb.	.08	.09
American bales	lb.	.06½	...
Doggrass Root, USP, cut bags	lb.	.14½	.16
Dragons Blood Mass, cases	lb.	.65	.70
Reeds, boxes	lb.	.90	.95
Echinacea Root, bags	lb.	.17	.18
Elcampane Root, bags	lb.	.05	.06
Elder Flowers, bags	lb.	.22	.25
Elemi Gum, 85 lb cases	lb.	.26	.28
Elm Bark, bundles	lb.	.19	.22
Grinding bags	lb.	.09	.10
Powdered, bbls	lb.	.16	.18
Ephedra Vulgaris, bales	lb.	.07	.08
ERGOT, 150-200 lb bags	lb.	.45	.63
Eucalyptus Leaves, bales	lb.	.05	.06
Euphorbia Pilulifera, Herb, bags	lb	.05	.08
Euphorbium Gum, cases	lb.	.14	.20
Fennel Seed, French, bags	lb.	.07¾	.08¼
German bags	lb.	.08	.10
Foenugreek Seed, 200 lb bags	lb.	.04½	.04¾
Fish Berries, 100-125 lb bag	lb.	.06	.07½
Flax Seed, Whole 182 lb bbls		14.50	15.25
Ground, 180 lb bbls	lb.	.06	.06¼
Fringe Tree Bark or Root bags	lb.	.13	.15
Fumigating Pastiles, boxes	lb.	.30	.35
Galangal Root, bags	lb.	.08	.09
Galbanum Gum, cans	lb.	.90	1.00
Gamboge Gum, 100 lb cases	lb.	.70	.75
Powdered, cases	lb.	.80	.85
Gelsemium Root, bags	lb.	.06½	.07½
GENTIAN ROOT, bags	lb.	.07	.08
Ground bbls, boxes	lb.	.10	.11
Powdered, bbls, boxes	lb.	.10	.11
Ginger, African, bags	lb.	.06¼	.06¾
Jamaica Grinding bags	lb.	.09	.09½
Cochin ABC & Lemon, bags	lb.	.12	.12½
Ginseng Root, cultivated cs	lb.	8.00	10.00
Wild Southern, cases	lb.	...	16.00
Golden Seal Root, bags	lb.	1.15	1.20
Powdered, boxes	lb.	1.45	1.50
Herb, barrels	lb.	1.25	1.30
Grains of Paradise, bags	lb.	.10	.15
Grindelia Robusta, Herb, bale	lb.	.07	.08
Guaiac Gum, 150 lb cases	lb.	.30	.31
Strained 75 lb cases	lb.	.70	.75
Guarana, tin cases	lb.	1.00	1.25
Hellebore Root, Black, bbls	lb.	.05½	.06
White, 250 lb bbls	lb.	.07½	.08½
Powdered	lb.	.11	.12
Helonias Root, bags	lb.	.32	.34
Hemp Seed, bags	lb.	.03¼	.03¾
Henbane Leaves, USP, bales	lb.	.10	.11
HENNA LEAVES, bales	lb.	.10	.11
Powdered	lb.	.14	.15
Hops, bales	lb.	...	.23
Horehound, Herb, bales	lb.	.07	.08
Hydrangea Root, bales	lb.	...	.06
IPECAC ROOT, Carteagna, bags	lb.	1.25	1.30
Powdered, 220 lb bbls	lb.	1.50	1.55
Isinglass, American, 130 lb cases	lb.	.95	1.00
Russian (Beluga), boxes	lb.	4.50	...
Jaborandi Leaves, bales	lb.	.08	.08½
Jalap Root, Whole, 150 lb bag	lb.	.18	.20
USP, Powd, 250 lb bbls	lb.	.23	.26
Japan Wax 224 lb cases	lb.	.09	.09¼
JUNIPER BERRIES, 125 lb bags	lb.	.04¾	.05¼
Kamala, boxes	lb.	.48	.55
Karaya Gum, Powdered, bbls	lb.	.12	.20
Kava Kava Root, bags	lb.	.13	.14
Kino Gum, Black, cases	lb.	.50	.55
Kola Nuts, 150 lb bags	lb.	.06½	.07½
Lady Slipper Root, bags	lb.	.45	.50
Larkspur Seed, bags	lb.	.30	.35
Laurel Berries, bags	lb.	.08	.09
Leaves, Greek, bags	lb.	.05½	.06½
Italian, bales	lb.	.08	.09
Lavender Flowers, Ordinary	lb.	.18	.20
Selected	lb.	.30	.32
Lemon Peel, bags	lb.	.09	.10
LICORICE ROOT, Whole bbls	lb.	.12	.15
Spanish Natural bales	lb.	.05½	.07
Powdered, bbls	lb.	.08	.10
Selected 2 & 5 lb bdls	lb.	.12	.15
Cutting, 125 lb bags	lb.	.06	.06½
Turkish, 150 lb bales	lb.	.05	...
Linden Flowers with leaves, bales	lb.	.15	.16
Without leaves, bales	lb.	.21	.22
Liverwort Leaves, bales	lb.	.15	.16
Lobelia, Herb, bales	lb.	.08	.09
Seed, bags	lb.	.35	.40
Lovage Root, Imp., bags	lb.	.22	.24
Lupulin N. F., tins	lb.	1.40	1.45
Lycopodium, 88 lb. cases	lb.	.35	.36
MACE SIAUW, No. 1, cases	lb.	.34	.35
Banda No. 1, cases	lb.	.42	.43
Batavia No. 2, cases	lb.	.31	.32
Malva Flowers, Blue, bales	lb.	.37	.39
Black, bales	lb.	.25	.40
Leaves, bales	lb.	.13	.14
Manaca Root, bales	lb.	.24	.25
Manna, Large Flake, cases	lb.	.58	.60
Small Flake, cakes	lb.	.37	.45
Sorts, cases	lb.	.45	.50
Mandrake Root, bags	lb.	.08½	.09½
Marjoram, Herb			
French, No. 1 bales	lb.	.14½	.15½
German, bales	lb.	.13	.14
Mastic Gum, 120 lb cans	lb.	.65	.70
Matico Leaves, bales	lb.	.18	.21
Mezereon Bark, bags	lb.	.15	.16
Millet Seed, Yellow, bags	lb.	.02½	.03
Montan Wax, Crude, bags	lb.	.06	.07
Bleached, bags	lb.	.26	.28
Moss, Iceland, bales	lb.	.09	.11
Irish, Bleached, bales	lb.	.10	.12
Mullein Flowers, tins	lb.	.75	.80
Leaves, bales	lb.	.07½	.08
Musk Root, Russian, bags	lb.	.07	.08
Myrrh Gum, 200 lb, cases	lb.	.18	.20
Nutgalls, Chinese, bags	lb.	.22	...
Aleppy, bags	lb.	...	Nom.
Powdered, bags	lb.	.23	...
Nutmegs, 110's cases	lb.	.14½	.15
75's & 80's cases	lb.	.16½	.17
Grinding, bags	lb	.18	.19
NUX-VOMICA Buttons, bag	lb.	.05	.06
Powdered, 200 lb bbls	lb.	.08	.09
Oak Bark, bags	lb.	.06	.06½
Olibanum Gum, 280 lb cases Siftings	lb.	.09	.10½
Tears, No. 1 Extra	lb.	.24	.25
No. 2	lb.	.16	.18
No. 3	lb.	.13	.15
Opium Gum, USP, cases	lb.	12.00	13.00
Granular, cans	lb.	13.00	14.00
Powdered, USP, cans	lb.	13.00	14.00
Orange Flowers, cases	lb.	.25	.30
Peel, Bitter, bags	lb.	.07	.08
Sweet bags,	lb.	.07	.08
ORRIS ROOT, Flor. bid. bags	lb.	.13	.14
Powdered, 200 lb bbls	lb.	.16	.17
Verona, bags	lb.	.09½	.10
Powdered, 200 lb bbls	lb.	.14	.15
Fingers, boxes	lb.	.90	.95
Ozokerite Wax, Brown, Hard	lb.	...	...
Bags	lb.	.24	.25
Green, Hard, bags	lb.	.30	.31
Yellow, Refined, bags	lb.	.37	...
Papain, Crude, 150 lb cases	lb.	2.25	2.30
Pure, Powdered, 10 lb bot	lb.	2.45	2.50
Paprika, bags	lb.	.20	.20½
Pareira Brava Root, bags	lb.	.13	.14
Passion Flower, bales	lb	.05	.06
Patchouli Leaves, bales	lb.	.18	.19
Pennyroyal, Herb, 100 lb bags	lb.	.07	...
Leaves, 100 lb bags	lb.	.12	.13

PEPPERMINT LEAVES, Imp bales lb.	.30	.40
Domestic, bales lb.	.24	.28
Pichi Leaves, bags lb.	.10	.11
Pimento Select, bags lb.	.06½	.06¾
Pink Root, True, bags lb.	.35	.37
Pleurisy Root, bags lb.	.15	.16
Poke Berries, bags lb.	...	.18
Root, 200 lb bales lb.	.06	.06½
Pomegrant Bark of Root, bags lb.	.29	.34
Bark of Fruit, bags lb.	.23	.28
Bark of Tree, bags lb.	.15	.18
POPPY FLOWERS, Red, bags lb.	.45	.50
Prickly Ash Bark lb.	.12	.15
Southern bags lb.	.11	.11½
Northern, bags lb.	.13	.14
Berries, bags lb.	.21	.22
Prince's Pine, bales lb.	.15	.20
Psyllium Seed, Black, bags lb.	.45	.50
Plantago Seed, Blonde, Bags lb.	.08	.09
Pulsatilla, Herb, bags lb.	.10	.11
Pumpkin Seed, bags lb.	.11	.12
Pyrethrum Flowers lb.	.18	.19
Pwd., pure, 200 lb.bbls. lb.	.22	.23
Quassia Chips, bags lb.	.06½	...
Quebracho, bulk, 125 lb. bbl. lb.	.22	.23
Quince Seed, bags lb.	.95	1.25
Persian, bags lb	1.25	1.40
Rape Seed, South American, bags lb.	.05½	.06
Dutch, bags lb.	.06	.06½
Raspberries, Dried, bbls lb.	.60	.65
Red Saunders, bags lb.	.08	...
Rhatany Root, bags lb.	.10	.11
Rhubarb Root, HD, cases lb.	.15	.17
Powdered, bbls lb	.20	.22
Rosemary Leaves, bales lb.	.05	.05½
Flowers, cases, bales lb.	.25	.30
Rose Petals, pale lb.	.16	.16½
Red lb.	.50	.55
Rue, Herb, bales lb.	.18	.20
Sabadilla Seed, bags lb.	.17	.18
Powdered, bbls lb.	.19	.19½
SAFFRON FLOWERS, American, bales lb.	.24	.25
Valencia, 1 lb cans lb.	10.50	11.00
Sage Dalmatian, bales lb.	.05½	.06
Sandarac Gum, 300 lb bbls. lb.	.30	.35
Sarsaparilla Root, Honduras, bales lb.	.45	.46
Mexican, bales lb.	.15	.16
Sassafras Bark, Ordinary, bales	.08	.10
Select, bales lb.	.16	.17
Savory Leaves, bale lb.	.06½	.07
Saw Palmetto Berries, bags. lb.	.07½	.08½
Scammony Resin, boxes lb.	1.30	1.35
Root, bags lb.	.08½	...
Senega Root, bags lb.	.42	.45
SENNA ALEX., 150 lb cases lb.	.25	.30
Half leaf 150 lb cases lb.	.12½	.14½
Sifting, 400 lb bales lb.	.11	.11½
Tinnevelly, Bold, 350 lb bales lb.	.12	.14
Medium Leaf lb.	.09	.10
Small Leaf, lb.	.07	.09
Pods, 350 lb lb.	.10	.11
Powdered, 200 lb lb.	...	.10
Serpentaria Root, bags lb.	.36	.37
Simaruba Bark, bales lb.	.25	.27
Skullcap Leaves, Eastern, bales lb.	.35	.40
Western, bales lb.	.20	.30
Skunk Cabbage, Striped, bales lb.	.12	.14
Snake Root, Canada Natural, bags lb.	.21	.22
Canada, Stripped, bags lb.	...	.50
Soap Bark lb.	.12	.13
Cut, 125-175 lb bags lb.	.08	.09
Crushed, 200 lb bbls lb.	.16	...
Powdered, bbls lb.	.12	.13
Spearmint Leaves, American, bales lb.	.22	.23
Spermaceti, blocks, cakes, cases lb.	.22	.24
Spikenard Root, bags lb.	.08½	.09
Squaw Vine, bales lb.	.13	.14
Squills, White lb.	.05	.06
Powdered, bulk lb.	.23	.25
Stavesacre Seed, bags lb.	.14	.15
Stillingia Root, bags lb.	.07½	.08
Stone Root, bags lb.	.08	.09
St. Ignatius Beans, bags lb.	...	Nom.
St. John's Bread, bags lb.	...	.09
STRAMONIUM LEAVES, bales lb.	.09	.11
Seed, bags lb.	.07½	...
Strophanthus Seed, Kombe, bags lb.	1.80	2.00
Styrax Liquid, Artificial lb.	.26	.35
Genuine, USP lb.	.38	.43
Sunflower Seed, bags Calif lb.	.04½	.05
South American, bags lb.	.07	.07½
Tamarinds, bbls lb.	.05	.06
Kegs keg	3.85	...
Tansy, Herb, bales lb.	.14	.15
Thus Gum, 280 lb bbls lb.	.08	.17
THYME, Spanish, bales lb.	.08	.08½
French, bales lb.	.06	.06½
Tonga Root, bundles lb.	.25	.26
Bark, bundles lb.	.25	.26
Tonka Beans, Angostura Cases	1.75	1.85
Para cases lb.	.90	...
Surinam cases lb.	1.00	1.10
Tragacanth Gum, No 1, 100 lb. cases lb.	1.35	1.40
No. 2 lb.	1.25	1.30
No. 3 lb.	1.10	1.20
Powdered, 50 lb boxes lb.	.80	.90
Turkish cases lb.	.50	.90
Turmeric Root Madras, bags. lb.	.06½	.07
Aleppy bags lb.	.05¼	.05¾
Powdered lb.	.13	.15
China bags lb.	.11	.12
Turpentine Venice True, 80 lb cases lb.	.32	.40
Artificial, 80 lb cases lb.	.17	.18
Uva Ursi Leaves, bales lb.	.05	.05½
Valerian Root, Belgium bags lb	.09	.10
VANILLA BEANS, Mexican, whole, cases lb.	4.00	4.50
Cuts, cases lb.	2.50	2.65
Bourbon, cases lb.	1.00	1.50
Vetivert Root, 100 lb bags lb.	.25	...
Violet Flowers, bags lb.	.80	.85
Wahoo Bark of Root, bags lb.	.32	.33
Bark of Tree, bags lb.	.19	.20
White Pine Bark, Roseed, bags lb.	.06	.08
White Poplar Bark, bags lb.	.06	.07½
Wild Cherry Bark, Natural thin, Green lb.	.06	.07
Rossed bales lb.	.09	.10
Thick Rossed, bales lb.	.04	.05
Wild Indigo Root, bags lb.	.11	.12
Willow Bark, bags lb.	.05	.05½
White, bags lb.	.15	...
Witch Hazel Bark, bags lb.	.05	.06
Leaves, bales lb.	.07	.08
Wormseed, American, bags. lb.	...	.08
Wormwood, Herb, Imp., bales lb.	.08	.08½
Yellow Dock Root, bags lb.	.07	.08
Yerba Mate, bags lb.	.12	.15
Santa, bags lb.	.08	.09½

Some Recent Products

Amatin is acetyl-meta-cresotinic acid. It comes in the form of crystalline needles and it has a slight acid taste. It has a melting point of 138 to 139 degrees C. It is soluble in water with difficulty only; on the other hand it is easily soluble in alcohol and ether. It has been observed in administering the drug to animals and observing its effects, that they are very much like those obtained with aspirin. The literature on the subject includes the following: Dobner, Muenchner Medizinische Wochenschrift, year 1930, number 26.

Symptomatic therapy has been practiced in most cases as the sole basis of treatment dermatological diseases and ailments. However there is also a tendency to accelerate the healing of the diseased condition by the use of symptomatic external agents, such as salves and tinctures, powders and poultices, particularly in those cases where it becomes possible to use a medicament directly to alleviate and cure the diseased part, as for example in the treatment of ulcers or abcesses on the lower leg by causing the varicose veins to shrivel up. Almost all the therapeutic agents, that have been used up to the present time in dermatological medicine, have been of purely empiric nature. Only in very few cases is salve therapy etiological at the same time, as for example in the use of rivanol salves against bacterial infections or vuzin salve in the treatment of skin diphtheria. As a result of this state of affairs, numerous new salves are constantly being brought out on the market. These preparations have for the most part been innovations in no way whatsoever, and in so far as they have been for the most part merely mixtures of well-known substances, which are of course uninteresting. The following salves are however of considerable interest and importance due in the first place to the manner of their composition and in the second place to the manner of their action.

First there are the urandil salves, the chronex salves, andriol salves. These are made by Dr. H. Truttwin in Dresden, Germany. The so-called "Andrioles" form the active principle of these preparations. Andrioles are compounds of iodine and uranium and iodine and bismuth, etc. All of these compounds are able to split off iodine. The iodine and bismuth compound is absorbed by the animal fiber in cold and warm water with a bright orange. This coloration is extremely fast to water, to acids and to light. It can be employed as a mordant in dyeing with alizarin colors. These substances have a very deep action on the skin which corresponds to their physical and chemical properties. The effectiveness of the drugs is due particularly to the liberation of iodine in the nascent state. These preparations are indicated for use in the treatment of acute and chronic eczymatic conditions.

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Lavender

(*Continued from page 144*)

existence spontaneously in certain parts of France, and is attracting considerable attention among certain French chemists at the present, as pointed out in April Drug Markets (page 361).

Among distilling perfumers of France only true lavender, aspic, and lavandin are treated, none of the other varieties lending itself to successful utilization. Aspic, the spike-lavender of France, is found growing most successfully in the departments of Hérault, Gard, Vaucluse. It is also found in certain parts of Spain. The true lavender referred to above is found almost exclusively in the Southern part of the French Alps, and in the regions of the high plateaux of the Cévennes, although in the latter districts the number of plants is less marked as compared with those found in other regions.

Lavender as a plant is vigorous, adapting itself to varying shades of climate, if not too rude. Where the most favorable conditions obtain, lavender takes on the form known as *delphinensis*, but where it appears stunted, and when its *xerophilous* character, or adaptability to a hot, dry climate, is tried beyond certain limits it takes on the form known as *fragrans*. These changes are outward ones, and may be easily and readily discerned. Depending upon the conditions surrounding it, the lavender also undergoes certain biological changes, with those plants found at low altitudes, producing freely an oil of ordinary quality. The plants associated with higher altitudes are known to give a smaller quantity of oil, but, as a rule, of better quality.

Up to comparatively recently, there were writers on lavender who asserted in all seriousness that lavender transplanted from mountainous districts to lower altitudes soon lost *all* its fine qualities. It was even stated that lavender found near aspic took on the better qualities of the latter, to the detriment of those inherent in the lavender. These views have, however, it is claimed, been disproved through experimentation, and it has been found that the lavender does not so easily lose the characteristics it has once taken on.

Referring to this "Les Parfums de France" states:

"Thus, some plants dug up on our instructions from the Causse du Larzac, at an elevation of 900 meters, and replanted in a plot of ground on our estate of the Vignal, at only 200 meters above the sea, are still yielding, nine years after plantation, an oil which is titrated at 47 to 48 per cent. in ethers, the oil being practically of the same quality as that usually obtained from plants at Larzac.

"What is still more satisfactory, plants grown from a sowing made in 1926 of seeds procured from the above plants, and placed on our estate of Puberclaire yielded in 1928 an oil with 45.7 per cent. of ethers, while some from the sowing of 1927 have an oil at 47.9 per cent.

"Transplanting to a lower altitude therefore had not altered the quality of the oil, and this observation has been many times confirmed with us with respect to plants from different localities."

Naturally, the views expressed above are still disputed by many in the trade, it being held that the only real oil of lavender, worthy of the name, comes from the higher altitudes, and that the lower altitudes can not, under any circumstances, produce anything to compare with that from the mountainous districts of France.

Another question in dispute is that of the quality of oils produced from both the mountain, or wild, and cultivated lavender plants. Some hold that it is only the wild lavender, found growing on the slopes of the mountainsides, that produces the oil worthy of the name lavender. Others again, through experimentation, hold that the cultivated lavender, if properly grown, will produce an oil that compares very favorably with the oil taken from wild lavender. The entire question still remains in the land of debate, and there will, no doubt, be a great deal said for some years to come in favor of both views.

(To be continued in the September issue)

Professional Pharmacy

(*Continued from page 143*)

Effect of Strychnine on Daphnia.
Arno Viehoever and Anna Schwenk Mikuriija.

Transparent animals, and esp. daphnia magna are well suited for qualitative and quantitative examination of general physiological effects upon the animal organism and its individual organs.

The general effect of strychnine sulphate upon daphnia is that of well known tonic or stimulating action of small, therapeutic doses, convulsive action of larger, toxic—, paralysing action of fatal doses, one effect overlapping other, depending upon particular organs or difference in vitality of different organisms. Most striking were effects upon organs of muscular system; but liver, in agreement with observation in more complex animals, became also visibly affected.

In a 0.7% solution of strychnine sulphate, heart beat was more affected than rate of respiration.

Time when body immobility (inability to rise from bottom of flat test tubes) is observed in majority of animals, may be used more conveniently—and much more speedily—than time of death as basis for judgment of degree of toxicity.

Immobility as well as death are definitely dependent upon concentration of poison in solution and time of action; results are relatively much quicker observable in concentrated than in dilute solution of strychnine sulphate.

Pharmacognosy, Chemistry and Pharmacology of Viburnum. H. W. Youngken.

History of past investigations of the taxonomy, chemistry and uses of this plant and its medicinal bark. Results of new observations on botannically authenticated entire shrubs of this variety of Viburnum Opulus and its bark are described under following captions: (1) Description of entire plant, (2) Description of root bark, (3) Histology of root at varying levels from tip, (4) Powdered root bark, (5) Description of stem bark, (6) Histology of stem at varying levels from terminal bud to base, (7) Histology of old stem bark, (8) Powdered stem bark. Distinctions are given between the American and European varieties of Viburnum Opulus.

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